

# The National Locksmith®

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— **page 130** — **NM5801-7350**

**Don't miss  
DIRECT MAIL  
BONUS CARDS  
see center spread**

**November 1997**  
**Volume 68, No. 11**

# SECURITY WITH TEETH!

page 18



## On The Cover...



Like a snarling junk yard dog, high-security locks such as the ASSA V-10, MIWA Tripoint, Abloy Disklock Pro, MUL-T-Lock USA, Sargent Signature and Schlage Primus, are the true turf defenders.

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Mercedes

NM5801-7350.

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# COMMENTARY



<http://www.TheNationalLocksmith.com>  
User name: natlock User ID: G5fh84

## What should you do after the sale?

As a publication, we here at *The National Locksmith* have occasion to purchase goods and services from many different companies.

Take printing as an example. We use the services of at least six or seven different printers during the course of a year. That's because not every printer is equipped to run everything we might need done. There are literally thousands of printers in the United States. Yet we patronize fewer than a dozen during the course of a year. There are two factors which we use when evaluating a printer and if they will meet our needs.

The first is price, of course. That always counts, doesn't it? And the second is customer service. There have been times when a printer offered the best price, but made our life so difficult with poor customer service that we chose to go with another source anyway. Usually, careful shopping gets us at least an equal price, but an improvement in attention to detail.

Why the heck am I telling you about all this? Well, first I would like to mention that we have just switched the magazine to a new printing company called Banta Press. This is their first issue.

Secondly, I mention it because you are deeply involved in the service industry. If you make your customers' lives easier, and give them a fair cost, they will reward you with good publicity and repeated business. However, even if you do an excellent job technically, but fall short on communication and service, you will find that you have a lot of dissatisfied customers anyway.

How, then, can you be sure that you have left a satisfied customer. One way I can think of is to ask. Yep, just ask. The day after you complete a job, make it a habit to call your customer, and to ask if the job was completed to their satisfaction, and were they pleased with your service.

Just because you finish the job and collect the check doesn't mean your customer was

totally happy. If he or she has some thought to share with you, believe me you should want to hear them. This is the fastest and cheapest way of finding out where you and/ or your employees can make improvements that will yield you more money in the long run.

When you call the customer, if they have a minor complaint, then just knowing that you cared enough to ask will probably soothe most of their ruffled feathers. If they have a more major complaint, you stand ready to correct it immediately, thereby saving a customer who surely never would have called on you again. And, ideally, if the client tells you that all went well and that they are satisfied, then you will feel good for having heard that information. Now is your chance to mention that you will be pleased to give them the same excellent service the next time they need you, and to please mention their satisfaction to their friends and associates.

The worst thing that can happen to you as a business-person is to have a customer who is not fully satisfied with your company. Why? Because they probably will not bother to call you with a complaint. On the other hand, they will not call you again, period. A locksmith who talks to his customers after the sale will make more money than one who doesn't!

*Marc Goldberg*

**Marc Goldberg**  
Editor/Publisher



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# Mango's Message

**A**re you a General Motors service provider for the Roadside Network Center (RNC)? If you are, changes are coming your way.

RNC is a service network for customers of General Motors vehicles. It is a one call dispatch center for services such as jump starts, fuel deliveries, flat tire changes, tows and lock-outs. The way the system works is: if a General Motors customer is in need of any of the listed services, they would call an 800 number that is directed to RNC. RNC would then dispatch the call to one of its service providers for the particular service requested. For example: if a GM customer lost the keys to their car, they would call RNC for service. RNC would in turn, call a registered service provider (such as a locksmith) in the area of the call to provide the service.

The Roadside Network Center has been in operation for a couple of years, but that is all about to change. I recently

## ROADSIDE NETWORK CENTER

33533 W. 12 Mile Road, Suite 200, Farmington Hills, MI 48331  
1-800-545-4RNC

### DEAR VALUED SERVICE PROVIDER;

The Roadside Network Center would like to take this opportunity to thank you for your continued support and excellent service over the past year and a half. As you may already be aware, services provided for Pontiac and Chevrolet/Geo vehicles will soon be handled directly through AAA Emergency Roadservice. The following is a breakdown of the services that will be affected, as well as other important information that may impact your business.

- In the month of September, AAA Emergency Roadservice will begin handling *all jump starts, fuel deliveries, flat tire changes, and non-warranty tows* for **Pontiac and Chevrolet/Geo** vehicles.
- Service Providers currently enrolled with the RNC will no longer be handling these services unless also currently enrolled with AAA Emergency Roadservice as well.
- If you are currently the preferred provider for either a Pontiac or Chevrolet dealership, AAA Emergency Roadservice will be contacting you directly as openings become available within their local network.
- If you are not currently affiliated with AAA Emergency Roadservice, and are not currently dealer preferred, but would be interested in being considered for opportunities as they become available within AAA Emergency Roadservice, please contact your local AAA representative.
- All *lock-out services* provided for Pontiac and Chevrolet vehicles will continue to be handled by the Roadside Network Center until further notice.

*Any services provided prior to the AAA changeover will continue to be reimbursed by the RNC at the following address.*

Roadside Network Center  
33533 West 12 Mile Rd. Ste. 200  
Farmington Hills, MI 48331

Please direct any questions you may have to the Roadside Network Center @ 1-800-545-4782

Sincerely,  
**James H all**  
Roadside Network Center

## Changing Places

received the letter shown that was sent to many of RNC's service providers:

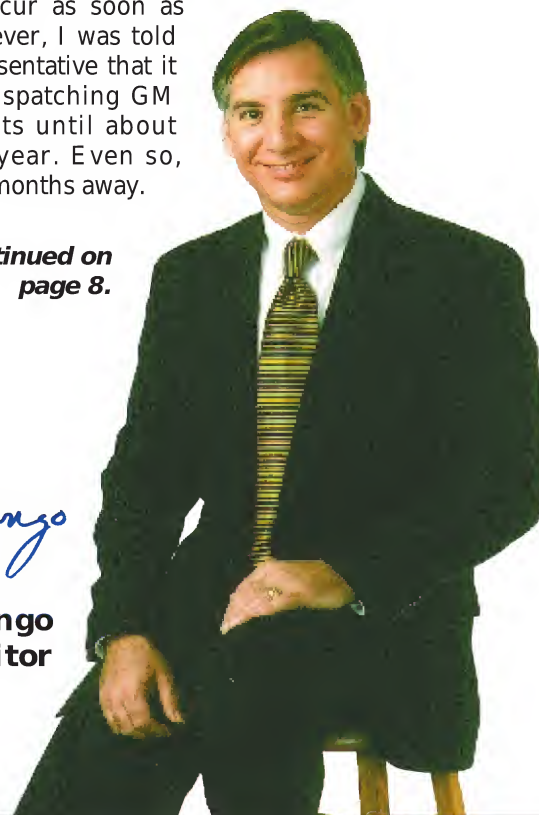
As stated, as of September, RNC will no longer be involved in the Emergency Dispatch Service (EDS) for jump-starts, fuel deliveries, flat tire changes and non-warranty tows. AAA Emergency Roadservice will be the new emergency dispatch provider. And, I have been told that AAA Emergency Roadservice will handle calls for not only Pontiac and Chevrolet/Geo, but all General Motors vehicles except Saturn.

**N**ow, you may have noticed that in the letter by RNC announcing this change, that AAA Emergency Roadservice will be taking over all the services previously provided by RNC except lock-out services, which will still be handled by RNC until further notice. That's right, all you locksmiths that are current RNC service providers can breathe a sigh of relief. RNC will still be dispatching General Motors lock-out service requests. Just don't exhale too vigorously, because this is going to change. AAA Emergency Roadservice will eventually provide this service as well. I heard rumors that this change could occur as soon as November, however, I was told by an AAA representative that it will not begin dispatching GM lock-out requests until about March of next year. Even so, that's only a few months away.

*Continued on  
page 8.*

*Greg Mango*

**Greg Mango**  
Editor







## Mango's Message

**Continued from page 6**

Is this a good change or a bad change? Well, with any action, there will be a reaction. It will be positive for some, and negative for others.

**F**or one, over the years, locksmiths have not had the most amiable working relationship with AAA. Even though AAA wanted very much to work with locksmiths, and preferred to use locksmiths for their own emergency lock-out requests, AAA was not paying their service providers a fee locksmiths considered reasonable for the service. Because of this, many locksmiths frowned upon and rejected AAA service proposals, refusing to become service providers for the company. This action caused AAA to turn towards the tow truck operators to provide this service, which they were only too happy to accept. As a result, the preferred service provider for AAA is not locksmiths, but tow truck operators. Not just because tow truck operators can provide lock-out service, but because they can also provide jump-starts, fuel deliveries, flat tire changes and tows. I don't think I need to tell you what this will mean when AAA begins dispatching General Motors lock-out requests.

If you are currently an RNC service provider for lock-outs who relies on these calls as a substantial source of income, and you are not an active service provider for AAA, you run the risk of losing it all.

I tried vigorously to contact a spokesperson at AAA National Headquarters in Virginia, only to find myself in the tangled web of their phone network, being transferred from person to person like a hot potato. Finally, I reached the person responsible for developing the General Motors emergency customer service program that AAA would be taking over. I asked him when AAA would start dispatching GM lock-out requests? As well as...

- What will be the fee paid for this service?
- Will AAA use the same service providers that RNC is currently using, or will they use their own network of service providers?
- Will AAA be adding any new service providers?
- If someone is not currently an AAA service provider, what is required to become one if someone so desires?

His comment to me was: "AAA does not make a habit of commenting to the PRESS, and I do not wish to change that policy now!"

I guess he told me.

You would think he had something to hide. Either that or I asked too many questions.

At one time, I knew a lady who was a spokesperson for AAA that would talk openly about AAA policies, plans and procedures. To my dismay, however, she no longer works for the company. Maybe it was because if she was a company spokesperson, who no longer could talk to the

press, there obviously wasn't much for her to do.

Like the pit bull on the cover of this month's magazine, I'm not one to release my jaws until I'm satisfied. Not being content with the comments I received from AAA Headquarters, I called the local AAA office to see if I could yield better results. I did manage to make contact with someone who was willing to "whisper" to me, unfortunately the conversation was not very enlightening. He did confirm that AAA would not be handling GM lock-outs for about six months. When asked what the fee paid for this service would be, he was very evasive. He did comment, however, that AAA would prefer to have locksmiths perform the lock-out service. He stated that the customer was more comfortable when a locksmith performed lock-out services as opposed to tow-truck personnel. He was also very aware of the friction between locksmiths and AAA.



In the course of our conversation, one bit of information that did come out is that AAA is also actively seeking to provide the same services offered by General Motors to Chrysler. Apparently a final disposition between AAA and Chrysler is pending. This was interesting to know.

**I**f you are not a service provider for AAA and wish to be, I would suggest that you contact the local AAA office in your area and speak to a representative as soon as possible. Once AAA has service providers in all the areas needed, it will not be adding new ones. The sooner you get your foot in the door the better.

As for what you can expect to receive as a fee for lock-out service, I suspect it will be less than you are, or can, currently make through RNC. This may also be the reason for the change from RNC to AAA in the first place. The order to make changes came directly from General Motors. The cause may have been that AAA offered to provide the same services at a reduced rate. You see, in the end, it was General Motors that is footing the bill for the service. Obviously, the less it has to pay out, the happier General Motors will be. This is only speculative however; I do not know that for sure.

Like I stated earlier, for every action there is a reaction. Some positive, some negative. If you want to continue to provide this service, I would position myself with AAA so that when these changes do come about, the reaction it has on my life is as positive as possible. **TNL**



NOVEMBER 1997

# Letters

*The National Locksmith* is interested in your view. We do reserve the right to edit for clarity and length.

## I Get It All

I would like to express my appreciation for the valuable information all your publications bring to me each month. I am a member of the TNL #2593, the NSO #0599 and the NLAA #0181 and find that the benefits of each have made locksmithing much easier for me as a small business entrepreneur. I have enjoyed reading each additions since I started in this occupation in February 1982. Thanks.

*Andrew Hammond  
Virginia*

## The Best I Can Be

Just a few comments on your article "Open Your Eyes!" TNL 7/97 page 120. As a mobile locksmith, virtually all of my business starts with the customer calling me. I try to be as courteous as possible to all, even the annoying and the blatantly obnoxious.

I received a call recently from a customer who became upset at my fee and began using obscenities. I

simply hung up. I try not to be rude and have received compliments on my "phone manners" and have received numerous accolades for responding promptly to a lock-out or other emergency services. I have found that most of my customers are willing to pay a fair (not cut rate) price for prompt, professional courteous service.

I was recently called on two vehicle lock-outs by the same customer at two different times. The first was a night call and my fee was \$75.00. The second was a day call and my fee was \$45.00. He understood the range in price and was more than happy to pay me. I have found that people will accept my appearance if I am called out at 6 am. on a lock-out. Of course I am in need of a shave, shower, etc., but they could care less as long as I can perform the service. By the same token, they will accept me as I am after I have spent 8-10 hours on the road and I am sweaty, in need of a shower and clean uniform.

*Tom Seager  
Michigan*

## Sorry, I Must Retire

I am very sorry but I am going to have to miss your publication because I am 79 years old and too blind to be able to read it anymore. In 1987 I closed down my locksmith shop due to bad eyesight, but since I enjoyed reading your magazine I kept it until now, as it is not possible with macular degeneration to read it anymore. I can write this letter to you only because I do not need to see the keys on this typewriter, as years ago I was a commercial radio officer aboard ship and well adapt at typing messages on the mill. I had two mills



and a third receiver on the distress frequency which made for a very busy job and no time to make mistakes on either typewriter.

I was a professional locksmith in Florida for twelve years and had a good reputation as such. I enjoyed it and your magazine very much. It sure stinks to grow old, believe me. I had to leave Florida and move to Kentucky because Florida is too greedy and is out to take the property of the elderly and stick you in a nursing home.

After I had sense enough to give my property to my son and bail out of there, they did just that to my 82 year old neighbor. I wanted no part of that. The zoning board got to me for putting some tar paper on my roof without a permit, to stop a leak from a ficus tree on the county property that damaged my roof. The Sears Roofing outfit told me they would put a new roof on my house for \$7,500 bucks, and a hundred bucks for wood, but ended up charging me \$8,000 for wood on top

**The National Locksmith**  
1533 Burgundy Parkway  
Streamwood, IL 60107  
Attn: Editor



**Continued from page 10**

of the \$7,500. The wood must have been gold plated.

I gave the place to my son and came up here where people respect the elderly and the cost of living is cheap. I really love it up here and everyone is just great.

Sorry I can no longer do business with you, but you put out a great magazine and I loved being a locksmith.

I lost a friend of mine by the name of Herb Goodman, who had a locksmith shop in Lakeworth for many years. He unfortunately ran his car in front of a train there at age 90. We were good friends and I miss him. It's heck to get old. Best regards.

*Eugene H. Wilbur  
Kentucky*

**Publisher's Note:** Wow, we hate to lose a valued subscriber, but it sounds as though Mr. Wilbur has really earned his retirement...and then some.

**-Marc Goldberg**

## What's Wrong With Saturn Locks?

I recently had an opportunity to make a key for a 1997 Saturn. I had just read the article in the May issue of *The National Locksmith* and felt comfortable with my tools and knowledge. I quickly found the system to be different than advertised. The differences are enough to be a problem to the local Saturn dealer as well.

To Start, I removed the deck lock and inserted a GM 10 cut key. I read the wafers through the drain hole and clipped a key on my A-1 Pak A Punch. I cut spaces 4 thru 9 and tried the key. It wasn't even close.

I examined the lock with a blank and cut another key in spaces 5 thru 10. I checked this key, clipped some adjustments in the depths and the key worked well. I tried their key in the door and it worked in one direction only and was hanging a little.

I went back to the deck lock and disassembled the lock. The wafers were slightly high. Two soft strokes with a file and the wafer was aligned with the plug. The key worked both the deck and the doors well. I sight read the first 3 wafers in the ignition and cut them in the 2, 3 and 4 positions. I brushed each cut with my file and the key worked every lock.

I had just finished cutting a GM 10 cut key from code for a '96 Pontiac so I know my clipper was calibrated. I then went to the local Saturn dealer to purchase a couple of locks and wafers or a pinning kit. I had to know what went wrong and why my 10 cut clipper didn't get the job done.

I had a pleasant experience with the service manager there. He could sight read keys and clip or punch them on an exacta punch. He had a exacta punch set up for GM 10 cut. He blocked out space 1 and clipped the key in positions 2 thru 10. Still he was having trouble getting the key to

work the door. It would work the deck and ignition freely, but would hang in the door it worked at all. He showed me how he forced the vice against the depth wafer to get the key to work.

I suspect the problem with GM 10 cut specs is in the spacing of the 8,9 & 10 slots. The relationship between true double sided wafers interacting with a sidebar make the depth critical. However, I'm still not certain.

Thanks for timely articles and for helping me stay on top of this service business.

*Leo C. Koulogaines  
Tennessee*

## Customer Background Checks

Last night I had a call to make a key for a Ford Taurus by a man who claimed he could do it himself. So, why didn't he?

Two weeks ago I had a call from someone who wanted me to bypass the alarm system on their car!

Once, a known thief showed me his set of picks that would make most locksmiths green with envy.

In the case of the Taurus and the alarm bypass, I passed up both jobs in the fear of teaching these people easy ways to steal.

Has the day come when we must run background checks on customers?

*Dave Craig  
Illinois*

**TNL**

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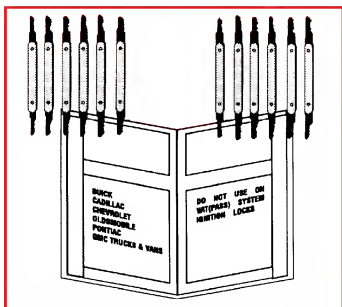
[Click here for more information](#)



# Security Café

**DROP IN FOR  
TOOLS, TECHNOLOGY  
& EQUIPMENT**

## LTI GM Rocker Lock Pick Sets



The GM Rocker Lock Pick Set from LTI Tools consists of 12 double ended single sided rocker picks, giving the locksmith 24 combinations covering the one-thousand plus possible key cuts configurations for GM side bar locks. The LT280 will work on most GM steering column, trunk and door locks.

## New LX-Series Outdoor Detectors From Optex

Giving your customer reliable detection capability doesn't have to be limited to indoors anymore. With the



release of the new LX-Series of Outdoor Photoelectric Detectors, Outdoor Detection can become a standard part of your security system offering. Features include: Sunlight Immunity, Wide and Long Range Detection, Built-In Photocell for Night Only Operation and Form C Relay output.

## Adams Rite Fire-Rated Concealed Rod Exit Device

The exit device that every architect, building owner and specifier wanted, but couldn't get is now a reality. Adams Rite Manufacturing is the first company to develop a fire-rated, concealed rod exit device for wood doors that

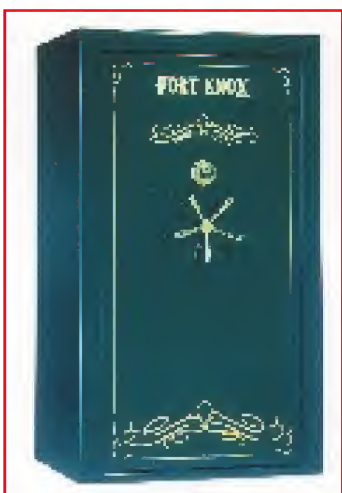


use a Georgia Pacific core and no 5-inch metal channel, a necessity with other devices.

The 3900 Series Exit Devices are Warnock Hersey Listed for 90 minutes on 8 and 10 foot double egress and standard pairs of doors and require not metal edge on the door. There is not bottom rod, installation and maintenance is easy and trouble free.

## Fort Knox Security

Fort Knox Security Products lead the industry in innovation and constant improvements. They include special Bolt Guard drill deflector. In addition to Bolt Guard, a hard plate with steel ball bearings mounted in critical areas to protect the locking mechanism against any drilling is added. The 1-1/4 inch Fire Protection package has been tested and certified in temperatures



exceeding 1200 degrees, while keeping the inside of the safe under 350 degrees.

Fort Knox carries the uncompromising UL listing for Residential Security Containers and Gun Safes. This means that all of the Fort Knox safes have passed the rigorous testing that Underwriters Laboratory puts them through. All safe come with an unequaled Lifetime Warranty.

## Schwab Corp. Introduces Composite Safes



For 125 years, Schwab Corp. has protected businesses with fire-safe products. During this anniversary year, Schwab is pleased to announce the premier of their composite safe line. Schwab's composite safes offer one great solution to two big problems — fire and theft. This dual protection is available as TL-15 and TL-30 models.

To protect against attacks on the door, the composite safes offer a drill resistant, manganese/steel alloy plate between the door jams on the TL-15's or over the entire door on the TL-30's. The safes include a 3.5" composite body, a glass plate relock system, 3-way 1.5" diameter bolts and an S&G 6700 combination lock. This all adds up to UL Classified Theft Protection.

## Best & Arrow Compatible Interchangeable Core By NT Falcon

Rounding out NT Falcon Lock's extensive line of high quality, affordable lock series, the company has recently developed a new interchangeable core featuring individual pin hole caps for Best & Arrow method installations. NT Falcon already produces a slide cover interchangeable core with cap and pin retentions for NT Falcon and other traditional installations.



Available in six or seven pin mechanisms, the new NT Falcon individual pin hole cap interchangeable core fits most keyed lock series including key-in-knob/lever, mortise, rim, cabinet, mailbox, dead bolt, padlock and threaded cylinder locks.



## SECURITY CAFE

### D&T Sliding Door Lock



Throw away that stick. Nowhere will you find a more secure lock for your sliding doors. It requires a screwdriver, drill and that's all. The patented two-piece unique sliding door lock can be secured to wood or steel in minutes (with 4 screws - provided). This lock is an effective, affordable alternative to more costly security systems. It's easy to use too — a flip of the finger locks and unlocks the lock.

It is impossible to open the door with this small secure lock.

### Olympus Cam Lock

The Olympus DCR Cam Lock has combined quality, dependability and style. The ease of rekeyability is due to our patented retaining clip. The lock is supplied with reversible straight and offset cams that meet the requirements of 12 locking positions. Also supplied with the DCR is a retaining stabilizer plate that prevents the hex nut from backing off, preventing the lock from being turned with a screwdriver. The DCR features a new 1" face (no trim ring required) with the Olympus logo. It is available KA, KD, and MK in the Corbin R1 keyway with four cylinder lengths (1", 1-1/8", 1-3/8", 1-3/4").

### R.Q. PV-1 Lock Scope

R. Q. Associates in association with AngioLaz has developed a specialized scope designed to read the wafer configuration of locks.

The shape has been designed specifically for this job. Its elongated shape provides more strength in its long direction for more control. This shape also allows placement of more light guide and a larger image bundle for superior image quality. The shaft is entirely stainless steel for durability. The battery operated handle provides convenience with a clear bright image. This scope was designed to allow wafer reading of ignition locks which because of their placement are difficult to view with the more common otoscope. With this scope you can comfortably sit in the drivers seat.

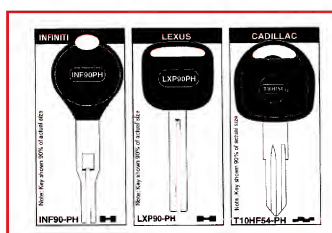


### Progressive Hardware-Cross-Reference

Progressive Hardware Co., Inc. has just released its second printing of their Spindle cross-reference chart for 1997. This two color wall chart is comprehensive listing of the various door knob and lever spindles that Progressive Hardware manufacturers, with cross reference to the OEM part numbers. The first printing of this chart showed it to be a valuable tool for the locksmith and this new expanded chart will be of even greater benefit.

### New Products From Jet

Three new automotive keys consisting of the High Security Infiniti, Lexus and the new



Transponder key for Cadillac Catera are now available from JET Distributors.

### Stainless Steel Thresholds by Rixson-Firemark

Rixson-Firemark has added a compliment of stainless steel thresholds for use with their heavy duty floor closers. 400SS and 500SS are used with the #5 style threshold to cover offset closers. The 700SS and 800SS units are for the center hung 1 and 4 series, as well as the offset #3 type. Rixson will continue to offer their base metals of aluminum and bronze. The bronze thresholds are now available in architectural finishes.

### Radio Key 600 Features Stand-Alone Proximity



Secura Key announces the new Radio Key 600 proximity access control system, which is now supplied with a new international keypad featuring easy to understand programming symbols. According to Secura Key National Sales Manager, Eric Bernocco, "Radio Key 600 is one of the lowest priced, single-door, self-contained proximity access control system in the industry. You will find that Radio Key 600 is not only more affordable, but easier to use and install.

Contact Secura Key at: 818-882-0020; E-mail: mail@securakey.com; Web: http://www.securakey.com.

TNL



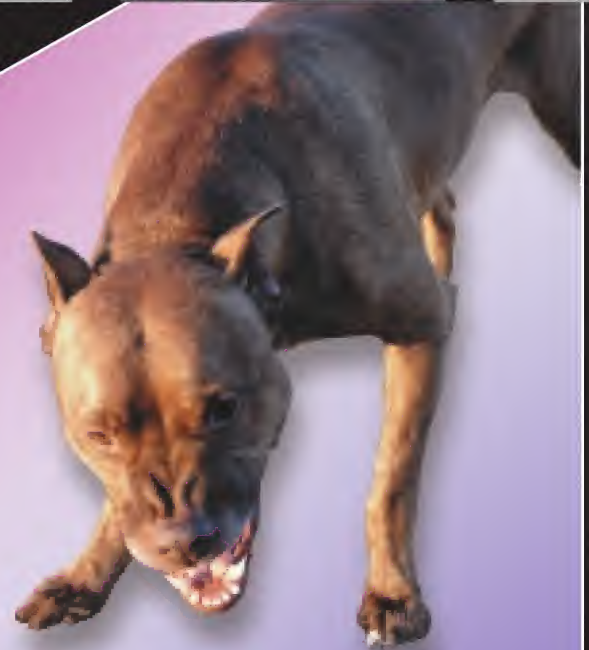
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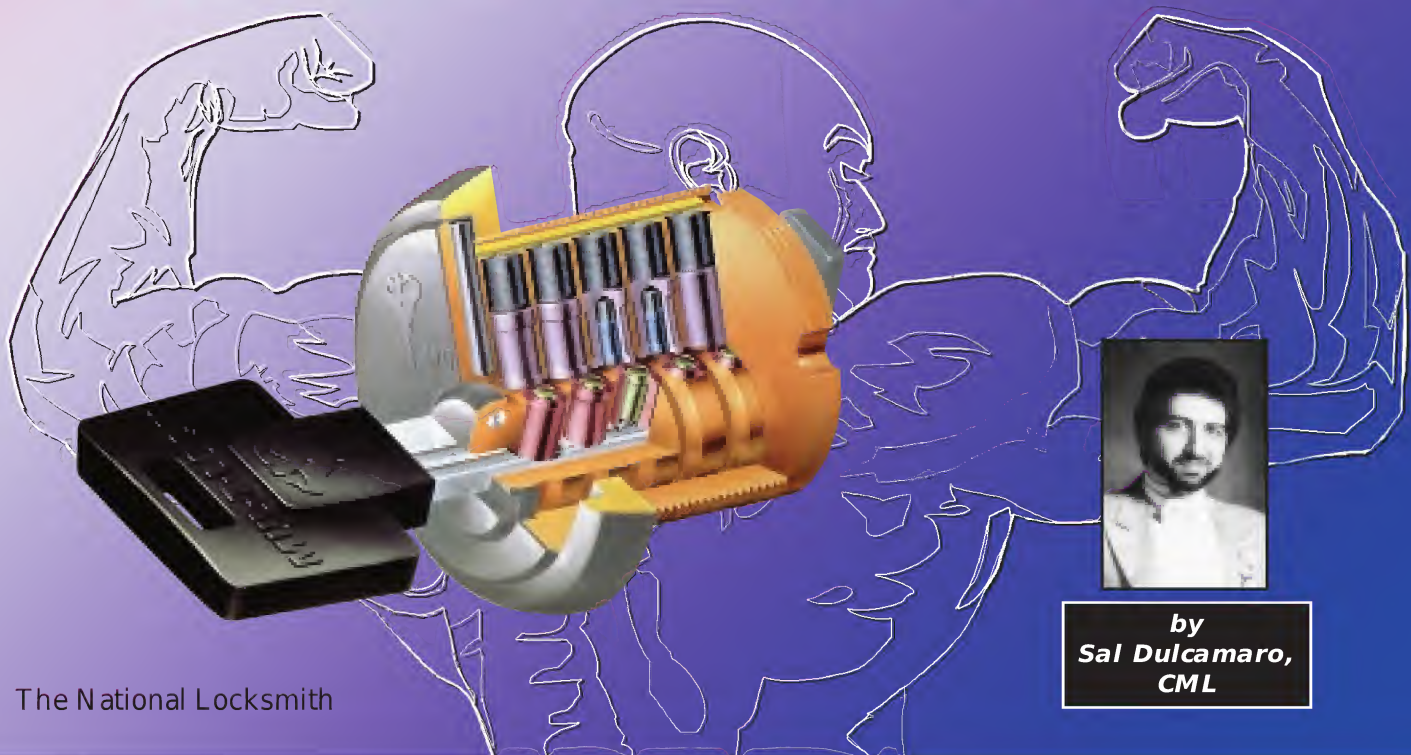


**COVER  
STORY!**

**HIGH SECURITY LOCKS!**



# **the Muscular HARDWARE of MUL-T-LOCK®**



by  
**Sal Dulcamaro,**  
CML



**T**he logo of Mul-T-Lock® is a key with bulging biceps. When you see many of their locks (and especially if you hold them in your hands), their logo becomes self explanatory. Mul-T-Lock makes some of the most massive and heavy padlocks (and other specialty locks) that I've seen. Muscular seems like a good description for the padlocks shown in *Photograph 1*, and the hasps shown in *Photograph 2*. Some of their most impressive looking lock hardware is designed for vehicle security, especially for large transport trucks. Considering that, in many cases, trucks may be hauling merchandise valued in the tens-of-thousands. An enterprising locksmith could make some serious profits going after that market.

The name of the company, though, seems to be derived from the heavy duty multi-point locking devices and doors that they also manufacture. A mounted sample of one multi-point locking mortise lockset is shown in *Photograph 3*. Three round shaped bolts extend from the opening edge of the door, while additional bolts extend through the door. One bolt locks into the frame on the hinge side of the door and two more bolts run vertically through the door, one moving upward toward the ceiling and the other down into the floor.

### **That Unusual Key**

The Mul-T-Lock key and cylinder are somewhat unusual. The standard lock cylinder is a five pin chamber hybrid pin tumbler lock. The lock is operated by a dimple cut key, but it is not your typical dimple cut key. Although the lock has just five pin chambers, there are ten bottom pins. The key matches it with ten dimple cuts. The oversized (demonstrator) key in *Photograph 4*, might explain some of the seeming contradictions.

The demonstrator key in *Photograph 4*, is partly inserted into the keyway of the oversized lock model. Two cut spaces (and part of a third space) are visible on the wide surface of the key blade. Notice that I mentioned cut spaces and not cuts. In each of five cut spaces (on a typical Mul-T-Lock key) there are two separate dimple type cuts, an outer cut and an inner cut. Those dual sets of cuts are designed to operate the two separate bottom pins in each pin chamber- also, an outer and inner pin.

*Illustration A*, should explain the key a little better. In the key diagram, the cut spacing is measured from the key tip. You may notice that the dimensions are metric. That is not unusual since the locks are manufactured in Israel, and virtually every other country in the world outside of the United States uses the metric system.

Although a tip stopped key, the Mul-T-Lock key has its cut positions identified from bow to tip (instead of tip to bow). The cut position closest to the bow is for the first pin chamber, and the cut position closest to the tip is the fifth position.

The keys (and the locks) are handed, as shown in *Illustration A*. The handing can be determined by holding the key with the tip facing away from you and looking down upon the wide flat surface of the key. If the grooves and key cuts are on the right hand side of the key, the key (and lock) is right handed (RH). If the grooves and key cuts are on the left hand side of the key, the key (and lock) is left handed (LH). That seems easy and straight forward enough.

Mul-T-Lock makes a number of cam locks (and a few other specialty locks) that have fewer than the standard five



**1. Some of the Mul-T-Lock Padlocks available.**



**2. The Mul-T-Lock Hasps have the same beefy look.**



**3. A mounted sample of one multi-point locking mortise lockset.**

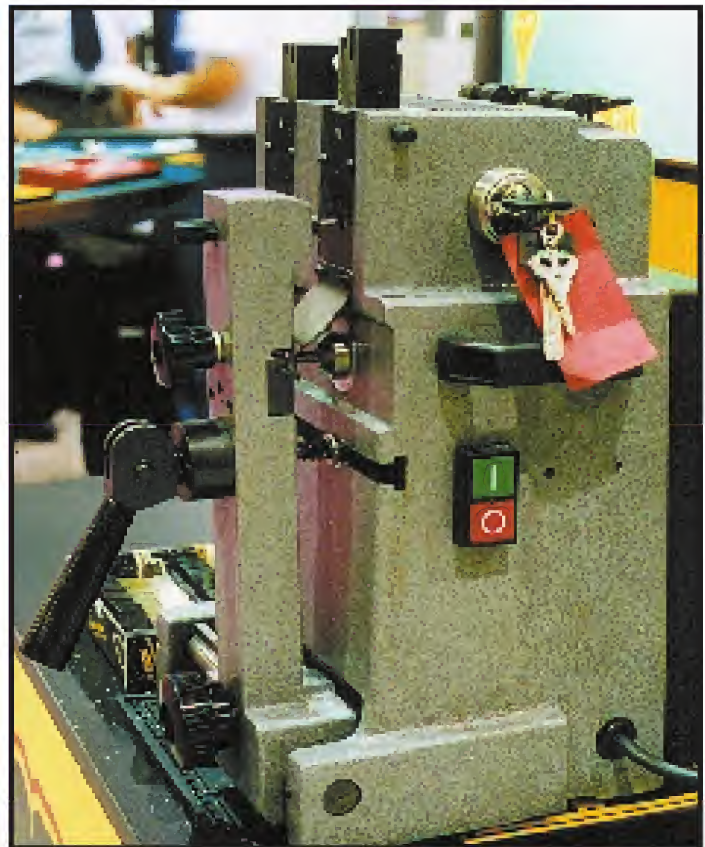




**4. Although the lock has just five pin chambers, there are ten bottom pins.**

pin chambers. In those cases, the missing chambers allow for omitting the corresponding key cuts. Since the key is tip stopped, the omitted cuts come from the side closest to the bow. Like some other tip stopped keys, it is possible to have the same key operate lock cylinders with various lengths and different numbers of pin chambers. A key with five cut positions can operate locks with 5, 4, 3 or 2 pin chambers. This unique situation allows master keying with different levels of security and key control.

A key with three cut positions can be issued to an employee who needs access to cam locks that have three pin chambers, and that three cut key would be unable to operate any other locks in the facility that have four or five pin chambers. Meanwhile, a five position cut master key could operate everything, including the five pin chamber office door locks, the three pin chamber cam locks and everything else coded into the master key system.

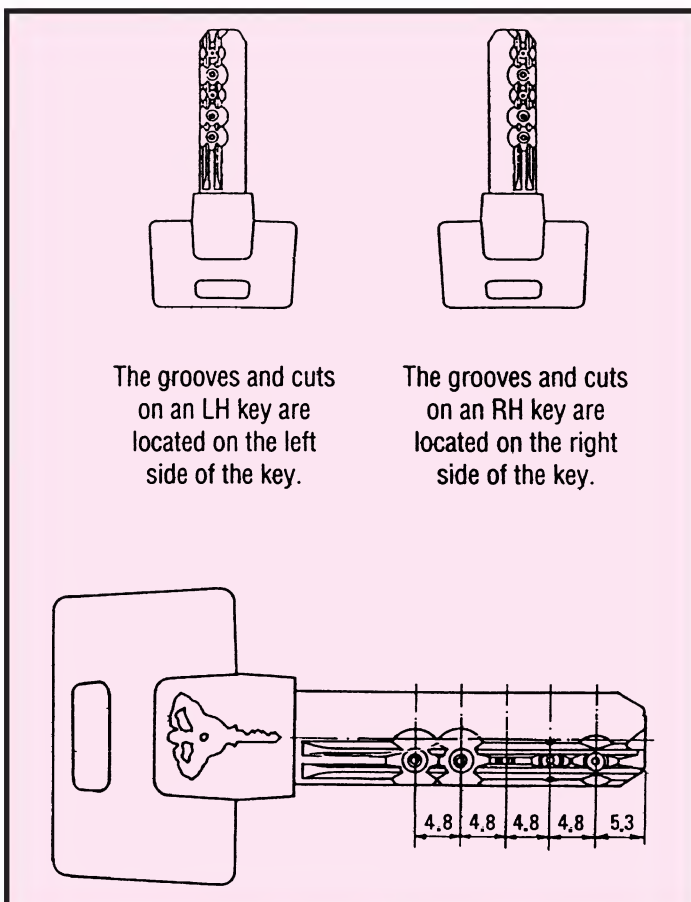


**5. A view of the Mul-T-Lock key machine.**

A view of the M ul-T-Lock key machine can be seen in *Photograph 5*. The machine can be used to make a key with a new cut combination when rekeying the locks or just to make additional copies of existing keys. For all practical matters, M ul-T-Lock keys are not duplicated in the traditional matter, i.e. tracing an original key and directly copying cuts onto another key. Instead the key would be decoded (measured) to determine the current cuts on the key (if the cut combination was not already known), and then another "original" key would be made. Because of the nature of the cuts within the cuts, any other procedure would tend to have problems. I don't think it would be wise to try some of the other brand key machines available (capable of cutting dimple cuts) to cut M ul-T-Lock keys, because of the precise centering required for cutting both the inner and outer cuts.

There are four different depths for the outer cuts which are identified by the letters A, B, C and D (and coinciding with the four lengths of outer pins). "A" has the shallowest cut depth of the outer cuts (and the shortest pin), while "D" has the deepest cut of the four (and the longest pin). The inner cuts have five depths: 1, 2, 3, 4 and 5 (which match five lengths of inner pins). The inner cuts and pins are identified by numbers, as opposed to the letter identification for the outer cuts and pins.

The key cut depths match the inner cuts 1 to 4 and the outer cuts A through D. A=1, B=2, C=3 and D=4. There is no lettered equivalent to the #5 inner cut depth, which is the deepest cut found on a M ul-T-Lock key. The key cut dimensions are exactly the same, as opposed to the pin lengths which are approximately the same size. The increment dimension is .5 mm or equivalent to about .020 inch.

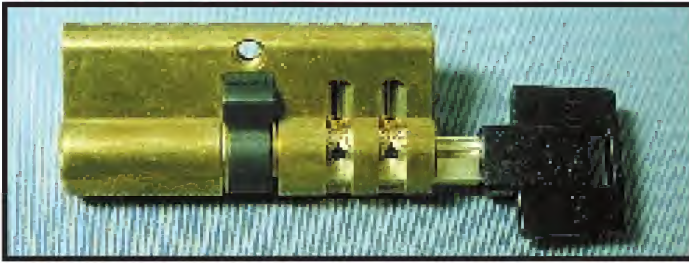


**A. In the key diagram, the cut spacing is measured from the key tip.**

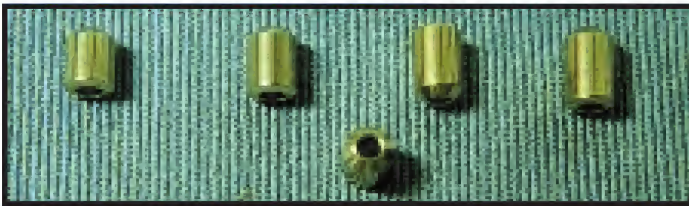
*Continued on page 22*



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6. The inside of a profile cylinder.



7. The four lengths of outer pins are shown. From left to right, they are: A, B, C and D.



8. An inner and outer pin are shown side by side.



9. The inner pin has been placed into the hole of the outer pin. Notice that the bottom tip of the inner pin extends down below the bottom surface of the outer pin.

### Inside the MUL-T-LOCK cylinder

The inside of a profile cylinder can be seen in *Photograph 6*. This is a Mul-T-LOCK cutaway cylinder, and parts of four pin chambers can be viewed through the cutouts in the lock body. The fifth pin chamber is not exposed, but would normally be one position further to the left than the exposed fourth pin chamber. The outline between the inner and outer pins can be clearly seen, looking into the partly rotated plug.



10. Shows what could be the entire contents of a pin chamber. At the bottom of the stack are the assembled inner and outer bottom pins.



11. The parts of a single cylinder Mul-T-LOCK deadbolt lock.



12. Shows the inside part of the lock body.

The four lengths of outer pins are shown in *Photograph 7*. From left to right, they are: A, B, C and D. Just below those four pins is another outer pin shown from a top view. The hole in the center is where the inner pin fits. An inner and outer pin are shown side by side in *Photograph 8*. The inner pin has been placed into the hole of the outer pin in *Photograph 9*. Notice that the bottom tip of the inner pin extends down below the bottom surface of the outer pin. If these two assembled pins were inserted into a pin chamber, both bottom surfaces would make contact with the bottom of the keyway.

*Photograph 10*, shows what could be the entire contents of a pin chamber. At the bottom of the stack is the assembled inner and outer bottom (or plug) pins. Just above it is a single unit top pin. Within the top pin are inner and outer pin components and a spring to give separate motion to the inner pins. The tumbler spring at the top of the stack only interacts with the outer pin. The spring inside the top pin unit interacts with the inner pin. If the bottom inner pin was longer than the bottom outer pin, the bottom inner pin would push into the top pin unit (locking the pins into each other) and create two separate shear lines within the same pin chamber.

### The MUL-T-LOCK Deadbolt Lock

The parts of a single cylinder Mul-T-LOCK deadbolt lock are shown in *Photograph 11*. It is a fairly heavy duty and substantial lock. It uses 1/4 inch mounting bolts to hold the inside and outside parts of the lock body onto the door. You may notice that there is a shield attached to both parts to cover and limit a burglar's access to the bolt mechanism.

*Photograph 12*, shows the inside part of the lock body. The two mounting holes will accept the 1/4 inch mounting bolts to hold the deadbolt securely to the door. After the bolts were attached, a cover plate, shown in *Photograph 13*, would conceal the bolts to make a more attractive installation. The thumb turn piece (just to the left of the lock body) has a set screw that can be tightened onto the post



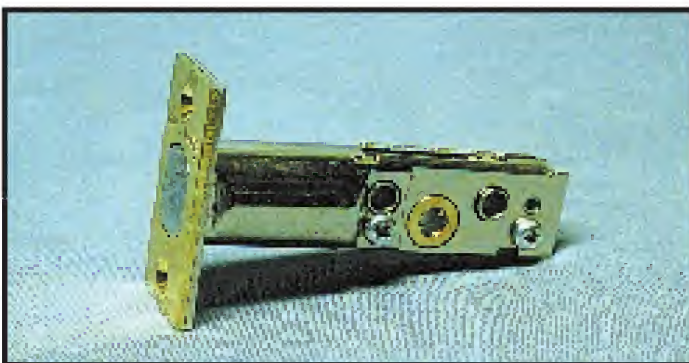
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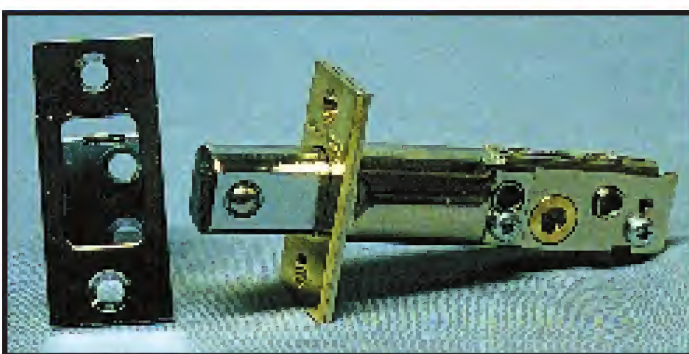
**13. A cover plate would conceal the bolts to make a more attractive installation.**



**14. The thumb turn is attached.**



**15. The bolt mechanism is shown.**



**16. With the bolt extended you can see that it helps to secure the door in two ways.**

that actuates the lock mechanism. The thumb turn is attached in [Photograph 14](#).

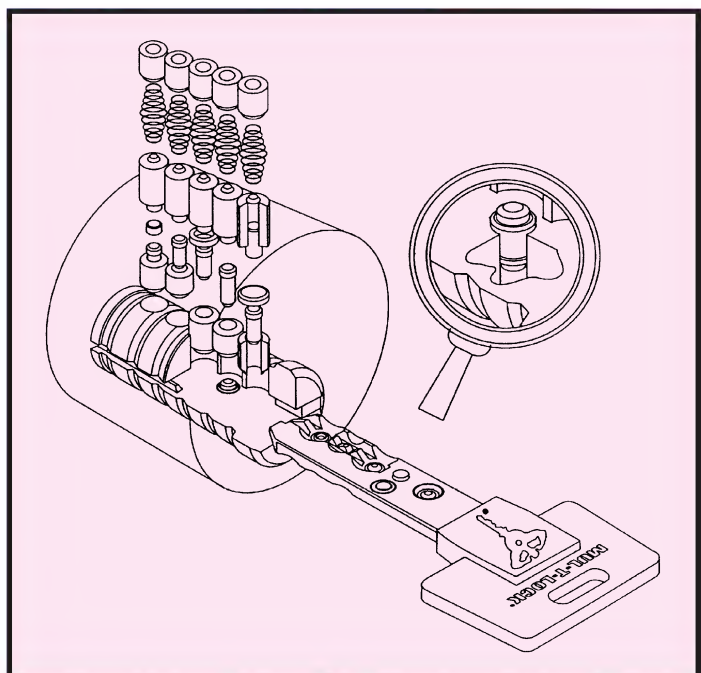
The bolt mechanism is shown in [Photograph 15](#). With the bolt extended in [Photograph 16](#), you can see that it helps to



**17. Shows how the bolt and strike interact.**



**18. The assembled lock is shown.**



**B. You will see a corresponding embedded pin within the Interactive plug, but that embedded pin is spring loaded instead of free floating like the embedded pin found in the Interactive keys.**

secure the door in two ways. There is the traditional one inch throw that extends into the strike plate, but also two locking ball bearings press outward from the sides of the bolt to trap the bolt into the cutout of the strike plate. That helps to prevent prying the door open. The heavy duty strike plate has offset mounting holes inside the backing plate to hold it more securely into the door frame. [Photograph 17](#), shows how the bolt and strike interact. The assembled lock is shown in [Photograph 18](#).

Continued on page 26



Continued from page 24



**19. A Mul-T-Lock Interactive mortise cylinder.**

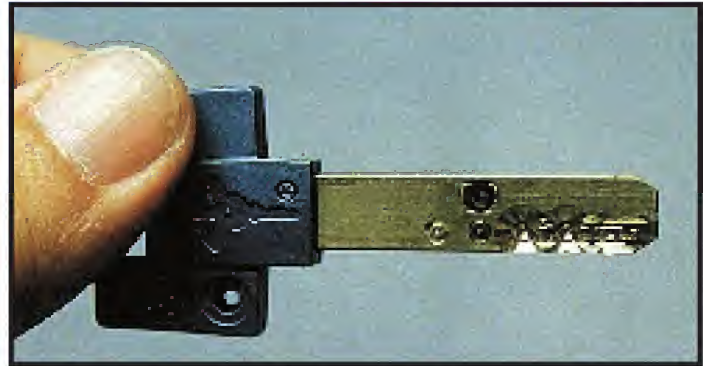
### MUL-T-LOCK Interactive

Fairly recently, Mul-T-Lock introduced a new product line called Mul-T-Lock Interactive. It is different from standard Mul-T-Lock products in the construction of the key and plug. *Photograph 19* shows a Mul-T-Lock Interactive mortise cylinder. It doesn't look substantially different than a standard Mul-T-Lock cylinder from the outside, but inside the plug and keys it is different. An Interactive style key can be seen in *Photograph 20*. An embedded (free floating) pin is now where normally there would be the second key cut position.

If you look at the diagram in *Illustration B*, you will see a corresponding embedded pin within the Interactive plug, but that embedded pin is spring loaded instead of free floating like the embedded pin found in the Interactive keys. The spring loaded embedded pin in the plug pushes upward on the free floating Interactive pin in the key to lift the plug pins in the second pin chamber and bring them to the shear line.

The primary purpose of the Mul-T-Lock Interactive line is to create a higher level of key control. A clever person with a milling machine might very well be able to create a copy of a patent protected key blank (even though they would be breaking the law), but the mechanical action of the embedded pin would be another hurdle making unauthorized duplication of the Interactive key somewhat more difficult. You wouldn't be able to just machine a key with a non-movable surface (in the second chamber position) to accomplish the same action as the embedded movable pin.

*Photograph 21*, shows how the embedded pin moves beyond the physical surface of the key blade. The Interactive pin must move above the top surface of the key to lift the pins high enough in the lock. A solid immovable surface in that position could lift the pins high enough, if such a key could enter the keyway. Because the normal top surface of the key just brushes the top surface of the keyway during entry, any permanent material on top of the key surface that would be high enough to lift the plug pins in the lock, would be too high to allow the key entry into the keyway. By contrast, the movable Interactive pin remains even with the top surface of the key during insertion (not causing any obstruction) and only lifts up above the top surface of the key when the key is fully inserted and the (spring loaded) embedded pin in the plug pushes it upward to bring the plug pins to the shear line.



**20. An Interactive style key.**



**21. Shows how the embedded pin moves beyond the physical surface of the key blade.**

The Interactive keys are cut in the same manner as other Mul-T-Lock keys, except that only four positions are cut. Since the Interactive pin could be located in line with the first, second or third pin chambers, the remaining (fifth) cut position would be already set from the factory and no cutting would be required. Mul-T-Lock recommends against using the key reader at the top of the key machine (for key decoding) to avoid damage to the original Interactive key. The key reader is fine for use with standard Mul-T-Lock keys. For Interactive keys, they recommend using the authorization ID card with key coding on it. The same type of cards are used with standard Mul-T-Lock keys, and can also be used for key coding rather than the reader on the machine.

Like standard Mul-T-Lock keys, the Interactive keys are double sided convenience keys. It is possible, for either type of key, to cut one combination of cuts on one side and different cuts on the other side to operate two different sets of locks. It is possible to have a business and home with Mul-T-Lock cylinders, and with them coded differently from each other, allow the business owner to use one key to operate both sets of locks. The employees of the company would have a reversible convenience key that would only work the business. The owner's family would have a reversible convenience key that would only work for the home. The owner would have a key that would have house key cuts on one side and business key cuts on the other side. It would be necessary, however, for the owner to remember to orient the key properly for each set of locks.

Because the Interactive pin (in the key) lifts the plug pins higher than the previously most shallow cut depths, additional shorter pins are required for servicing Interactive lock cylinders.

Mul-T-Lock has a broad product line of lock cylinders that will work with many different applications and brands of hardware. You can get additional information on all of it by calling Mul-T-Lock at 800/ 562-3511. **TNL**

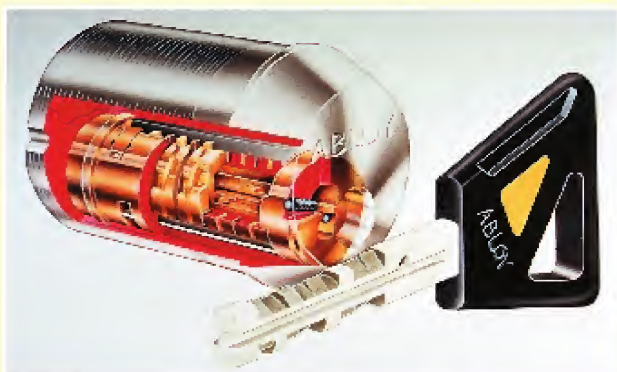


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## MORE HIGH SECURITY PRODUCTS...

### **ABLOY® Disklock Pro High Security Cylinders**

Abloy Disklock Pro rotating disc lock mechanism is close in principle to the rotating tumblers in a safe. This unique construction makes



the cylinder virtually pick-proof. PRO cylinders offers 1.97 billion combination possibilities on each key profile, which allows the creation of even the most complicated custom designed masterkey systems.

PRO product range comprises mortise and rim cylinders, key-in-knob cylinders, tubular deadbolts, key deposits, padlocks, cam locks, cabinet locks, switch locks and rim locks, which can all be incorporated into the same masterkey system.

Both solid brass and UL 437 listed case hardened steel cylinder housings are available. Disc controller assembly prevents the key from turning until it is fully inserted.

The combination is set by turning the key 90 degrees in either direction. The proper key will align the side-bar-gates. This allows the side bar to drop inside the cylinder plug, allowing the lock to open. As the key is turned back, the discs lift

the side bar back into the locked position.

Abloy offers 11 different colored inserts for easy key identification. The reversible PRO key is protected by utility patents worldwide, and must be cut on a dedicated ABLOY key cutting machine. Key duplication is limited to authorized ABLOY dealers.

Complete service kits, technical manuals, and a technical training video are available for new and existing dealers.

For More information contact ABLOY at: (203) 624-5225

### **ASSA® V-10 Cylinder**

In a marketplace where many "high-security" locks offer no guaranteed key blank control, ASSA has moved ahead of the competition by extending its patent on the Twin V-10 cylinder. This move insures that ASSA will continue to provide unparalleled security and patented key control for its customers well into the 21st century.

The Twin V-10 cylinder is listed under UL 437, a series of tests designed to gauge resistance to physical attack. To provide maximum

security against picking, each V-10 contains two independent locking mechanisms. Inactive "dummy" grooves in the side pins catch the side bar when improperly aligned. If rotational force is applied to pick the lock, the mushroom-spoiled pin tumblers, close tolerances, and counter-milled pin chambers protect the cylinder from virtually every known picking method. In addition, each cylinder has been tested against pulling, impressioning and prying. Drill resistance is accomplished with case-hardened steel inserts and stainless steel pins.

ASSA keys are cut with two sets of bittings, each operating an independent double locking mechanism. For long-lasting performance and convenience, each key is reinforced, features a rounded back for smooth operation, and offers an enlarged key bow with can easily be used by manually impaired individuals.

With new extended patents in the U.S. and internationally, the innovative ASSA key design and V-10 cylinder eliminate unauthorized key duplication and create a key control system that is unequalled in the industry. ASSA V-10 provides exclusive keyways



with local, regional and national key control.

For more information contact ASSA at: 10300 Foster Ave., Brooklyn, NY 11236. Phone: (718) 257-4700, Fax: (718) 257-3299.

### **DOM Security Locks**

A Black & Decker Company, has introduced a new patented High Security locking system specifically for the North American Market.

The distinct core and housing pins, in tandem with the new cores and housings, make the system pick and drill resistant. The controlled nickel silver keys are reversible and inserted horizontally into the lock. The keys are 100% guaranteed against breakage.

Contrary to the old 10-pin system, the ix 5HT has 5 straight pin tumblers with 10 cutting depths and is easy to assemble. At this time, DOM High Security Locks can be used in knobs and levers of all major North-American manufacturer's hardware.

Master keying flexibility is excellent, with the plans constructed in the factory in conjunction with the customer.

The complete range of products allow the locksmith to sell additional locks within the same keying system; like cupboard, switch and heavy-duty cam locks.

The swift Ship Program ensures fast and dependable service.

For more information contact DOM at: 100 Central Ave., Brockville, ON K6V 5W6, Canada. Phone: 800-363-4803, Fax: (613) 498-5820

### **MIWA "Tripoint" High Security Retro Fit Lock System**

"Tripoint" is a patented high security, combination magnetic and pin tumbler





make up a cylinder for a customer, the locksmith only has to read the pin cuts on his set-up keys and pin the top chamber

system designed to retrofit most existing hardware lines. The tumbler mechanism consists of four standard pin tumblers and four side locking magnetic tumblers. Cylinder plugs are locked in three locations. The pin chamber is at the twelve o'clock position and the magnetic tumblers lock at both the three and nine o'clock positions. Opening occurs when a key with the correct magnets and proper key cuts is inserted. The pins work just like any other and the key magnets draw the magnetic tumblers in from the two side locking positions.

Due to the enormous number of combinations achievable from the four pin tumblers and twenty-four different magnetic tumblers, Miwa can offer locksmith dealers their own exclusive keyway. This is accomplished by designating a combination of two magnetic tumblers to a dealer providing him with essentially his own double locking sidebar.

Additionally Miwa has developed a program for the small to medium size locksmith shop. Even mobile locksmiths can now offer high security and key control without any investment whatsoever in key cutting machines and other tools. Miwa offers the locksmiths cylinders that are pre-loaded with the exclusive magnetic combination. Miwa also offers pre-cut and combined keys to operate the cylinders. To

from his pinning kit. Now making a high security cylinder is as easy as pinning a Kwikset lock.

Set up keys are sold in sets of KA3, KA4, and KA6. If a customer requires more than 6 keys, the dealer can call Miwa's toll free number and order more keys to be expressed directly to the customer. This eliminates any need to ever have to return to the shop and handle a high security sale.

The system is fully serviceable by dealers. Dealers receive a complete operating manual which includes drawings and diagrams that explain how to key cylinders and make master key systems.

*For more information contact Miwa at: 6216 S. Sandhill Rd., Las Vegas, NV 89120. Phone: (800) 387-4631, Fax: (702) 454-4577.*

#### **Sargent Signature**

Whether a facility manager's concerns are key control, system flexibility, or just plain systems maintenance, Sargent Signature Series cylinders and masterkey systems are the state-of-the-art in security control.



**medeco**  
HIGH SECURITY LOCKS

The market leader  
in locking systems  
for security,  
safety, and control.

[Click here for more information](#)



The unique "signature" of the Signature series key and lock system is achieved through special machining of Sargent's standard key blanks, cylinder barrels/ plugs and cylinder bodies. The interaction of the top pins and blocking bars, combined with the cylinder's master key pinning configuration and dimpled key blanks, provide three separate locking points within the cylinder.

These patented features allow each facility to have its own unique keyway created by the positioning of the pins in the barrel and key dimples. Combining specific configurations of the locking features boosts the total number of combinations into the millions.

A major advantage to this system is that owners can incorporate cylinders with the patented features and standard Sargent cylinders into the same master key

system and key them alike. However, while Signature keys can operate both type of cylinders, standard keys can only operate the standard cylinders. It allows different levels of security, while satisfying budgetary concerns by eliminating the expense of purchasing an entire new system.

In designing a field-serviceable system, one of the objectives was to create a product that didn't require special key cutting equipment or pinning kits. This system is fairly easy to service.

If a facility's master key system is compromised through loss of a top level key, the facility's maintenance or security personnel can reconfigure the Signature cylinder on site by realigning the blocking bar. This changeover voids out existing keys without disturbing the master key pinning or changing the

master key system's number patterns. Customers can also create an alternate configuration to a corresponding Signature key blank that can be cut to the same bittings as the original keys. And the Signature feature doesn't require field assembly. Components within the Signature cylinder are loaded and sealed in the factory in specific configurations. A pick and drill resistant version of the cylinder that meets UL 437 requirements is also available.

For more information contact Sargent at: 100 Sargent Dr., New Haven, CT 06511. Phone: 800-727-5477, Fax: (203) 776-5992.

### **Schlage Primus® Cylinders**

The Schlage Primus system features high security cylinders that resist physical attack and provide multiple levels of key security. At the same time, it also simplifies key control and minimizes excess cost and complexity.

Primus cylinders are built around a special dual-locking feature that makes them highly resistant to picking and virtually eliminates unauthorized key duplication. They combine a patented sidebar mechanism with a standard pin tumbler cylinder.

High-security Primus keys are compatible with both Primus and standard Schlage keyways, allowing one master key to be used throughout a facility. Primus key blanks are furnished with patented side bit milling, a unique geometric

contour that interacts with a matching pin-set inside the cylinder. Keys can be finish-cut on standard keying machines, and no special equipment is required. A special ID card system provides a range of security levels that include increasingly restrictive key blank availability and more selective signature verifications and side-bit milling combinations.

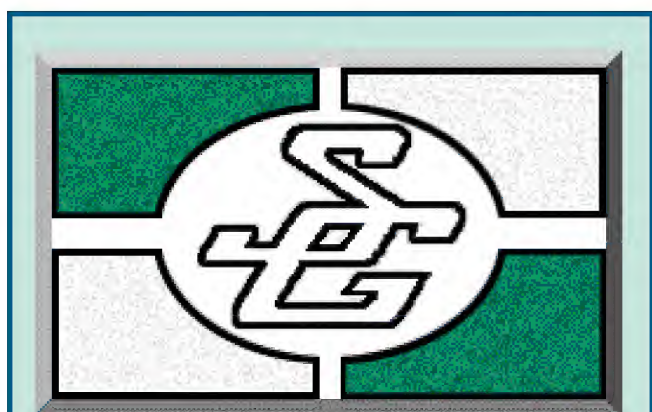
The Primus system offers a variety of cost-effective cylinder choices, including the lower-cost Controlled Access series 20-700 cylinder for use where key control is the primary need. Where high security is critical the UL-listed series 20-500



provides extra protection from drilling or other physical attack.

The Primus system is easily tailored to match any combination of security needs, without sacrificing key control. With Schlage masterkey system in place, upgrading is easy and Primus dual-locking cylinders are easily retrofitted into most Schlage locks.

For more information contact Schlage at: 1915 Jamboree Dr., Colorado Springs, CO 80920. Phone: (719) 390-5075. **TNL**



**Make Sargent & Greenleaf's Comptronic locks your choice for electronic safe locking solutions.**

[Click here for more information](#)



# THE WEB ZONE

A MONTHLY REVIEW OF WEB SITES

## Dynalock Corp.

<http://www.dynalock.com>

### DynaLock Corp.

Dynalock's corner of the web contains an online product catalog featuring specifications of the product line, as well as photographs of the various locks. This is especially helpful when looking for a tour of the various series products and the purposes they serve.

You will also find sections here showing prices, and the names and contact information for reps and distributors and even a section of employment opportunities. Currently listed in that area are want ads for reps in several different territories. So you reps might want to log on today!

## Lori Lock

<http://www.lorilock.com>



Graphically, this is one of the nicest sites the Zone has laid our electronic eyes on. The background is black, and beautiful and rich, four color photography leaps off the screen. Shown are a variety of Lori's more famous products

such as the 4500 series deadbolt and cylinders. You also get a listing of which shows Lori will be attending at what their booth number is.

Click on the OK Program link and read details about how you can sign up for Lori's "One Key" program, designed to promote your services to your own customers. When you qualify, you'll receive free literature and materials for display and give away purposes.

## Papaiz Locks

<http://www.papaizlocks.com>



Though this web site is not nearly the prettiest one we have seen, to be fair we should mention that it is currently under construction. However, we're glad to see this site anyway. That's because we receive a fair number of locksmith phone calls looking to track this company down.

Apparently alive and well, functioning out of Houston, TX, Papaiz can ship you directly from their warehouse on their line of imported locks. There is an e mail link also so you may contact the company directly. To save you time, if you'd like their e mail address, it is PapaizUSA@aol.com.

## Jensen Tools

<http://www.jensentools.com>

Here's a nifty site for all those tool lovers out there...and what self-respecting locksmith doesn't fit into that category? Jensen sells a huge variety of tools, kits and cases for just about every application known to man.



When you push the Products and Promotions button, you have a search engine at your disposal. You can search by tool manufacturer, product name or by application. This makes it quick and easy to locate just the right tool or kit you need. Also online, you can request a printed catalog, e-mail or place an order.

## LDM Enterprises

<http://www.ldment.com>



Thankfully this site tells you about the company and the various product lines they distribute. But in order to actually view the products you need to request a catalog via a button. That's a good thing because the company distributes tools for automotive locksmiths (and repossessioners) which would not be good to show the general public. We do expect that they evaluate to whom they are sending catalogs from online requests.

Perhaps some layer of security could be added to the site in the future to allow legitimate locksmiths to view the range of products on the web. LDM distributes for a number of well known manufacturers, but we're glad they exhibit caution.

## Abus Lock

<http://www.abus.com>



You can visit Abus in any one of a number of global regions, including the U.S. From this site you might learn that Abus sells on a worldwide basis, and that they make more than just an extensive line of padlocks. Their product range also includes home security hardware, motorcycle security and bicycle security.

While your regional button will direct you on how to obtain a catalog and further information, we would like to see an online catalog with photos and product specs added to this site. That would help the locksmith be able to identify what he needs to order right off the web.

TNL





# PASS KEY

## Service Equipment

by ALL-LOCK



by Tom Mazzone

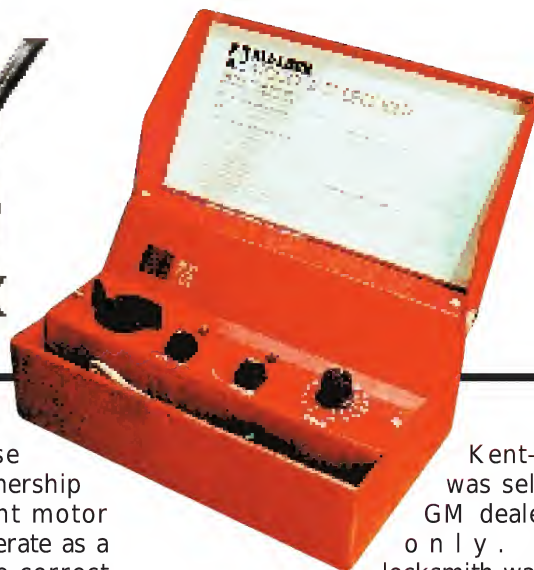
**W**henver a specific motor division introduces a new product line or revamps a service procedure, it seems that a new and very specific type of specialty tool is required to perform such operations. These are typically called Dealer Essential tools in which the dealer has

no choice, but to purchase them. This is part of an ownership agreement with the parent motor division, that in order to operate as a full service dealership, the correct equipment be purchased as necessary.

With the case of General Motors dealerships, for example, as the specialty tools are made available, they are shipped to the dealerships and the dealers are billed accordingly. There is not an option to not purchase a tool that is deemed a Dealer Essential piece of equipment. Some tools are luxuries, but Dealer Essential tools are a must.

When PASS KEY, (originally known as VATS) first came out in 1986 on the Chevrolet Corvette, Kent-Moore was the only piece of test equipment on the market for servicing and testing vehicles equipped with Vehicle Anti Theft System.

The Kent Moore Interrogator originally sold for approximately \$169.00 and one could not be purchased until all of the Dealer Essential needs were first filled. There was a waiting list and at that particular time,



Kent-Moore was selling to GM dealerships only. If a locksmith wanted to get into VATS service

early, as this writer did, you had to have a dealership's parts department order one for you. This required knowing someone in that dealership facility well enough to be willing to place the order for you.

**F**ortunately, for the locksmith, the aftermarket lock manufacturers have recognized the need for alternate sources of test equipment and replacement keys. This month's product review is on one such company's contribution to VATS/PASS key test equipment and related products. That company is ALL-LOCK Co., of Selma, Alabama.

For a long period of time, Briggs and Stratton, now Strattec Corporation, was the only suppliers of replacement lock sets and resistor chip keys for PASS KEY equipped vehicles. Being the OEM manufacturer for lock sets and keys at that time for GM, it stood to reason that Briggs would be also as heavily involved in after market sales to locksmiths.

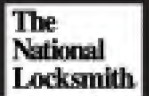
ALL-LOCK has also been a "household name" to locksmiths and is now enjoying their place in the market as an alternative to OEM test equipment and key blanks. We will first review the ALL-LOCK PASS KEY decoder and diagnostic tool.

The ALL-LOCK LT7000 decoder is an extremely well constructed piece of test equipment (see Photograph 1). It is built into a very sturdy steel box with an attractive bright red, baked enamel finish. The underside of the test equipment's lid has complete instructions that follow G.M. manufacturer's guide lines for testing



**1. The ALL-LOCK LT7000 decoder is an extremely well constructed piece of test equipment.**





the PASS KEY system and generating replacement PASS Keys.

As with the OEM equipment, it has a built in four minute timer to count out the delay between attempts. The resistance code when duplicating replacement keys is easily read via an LED readout on the face of the tester. All 15 possible key resistances are also clearly marked off.

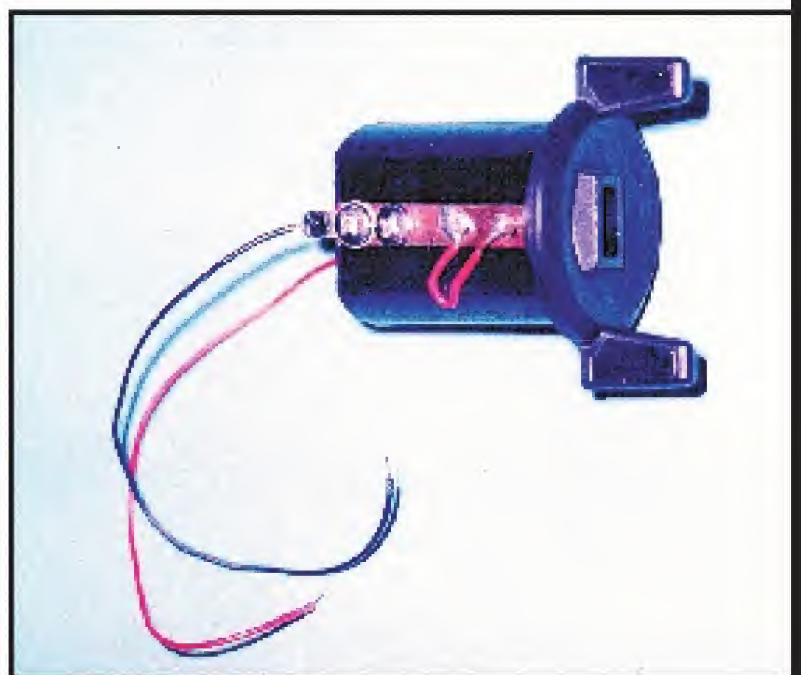
**W**hen PASS-KEY was first developed, it was confined to usage on the "A" keyway, single sided primary key. This held true until double sided keys were introduced to PASS KEY in 1995. Test equipment that was on the market prior to this now required a special adapter to be retrofitted into existing test units.

ALL LOCK units that were originally designed for single sided keys can be refit with adapter LT7006 to accept both single and double sided keys (see Photograph 2). This adapter will also allow the 1997 Corvette PASS KEY with the wider bow to be tested in the unit.

The LT7000 units that have been put out on the market since double sided keys came out currently accept all of the PASS keys in service. The

units already come prefit with the new style adapter. The distance between the "ears" of the adapter is considerably wider than the version that originally accepted single sided keys only. Complete instructions are included with the adapter to make installation fast and easy. The LT7000 is powered by a standard 9 volt battery.

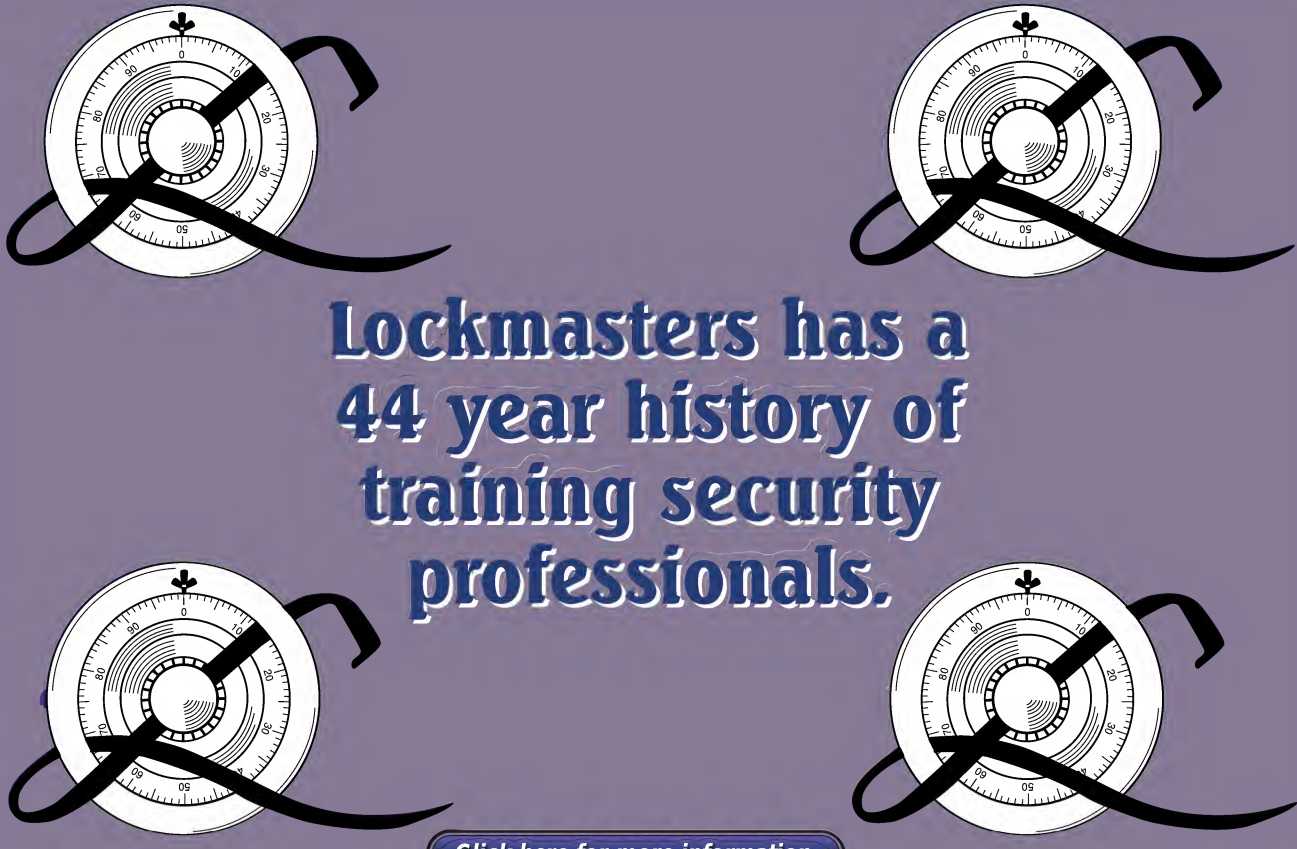
Probably one of the most noticeable differences in the appearance of the ALL - LOCK replacement PASS KEY blanks is the fact that the resistor pellet is molded in under the plastic coating on the bow of the key. This should eliminate the common problem of resistor blanks actually falling out of the key blade and



**2. ALL LOCK units that were originally designed for single sided keys can be refit with adapter LT7006.**

causing a "won't start" condition.

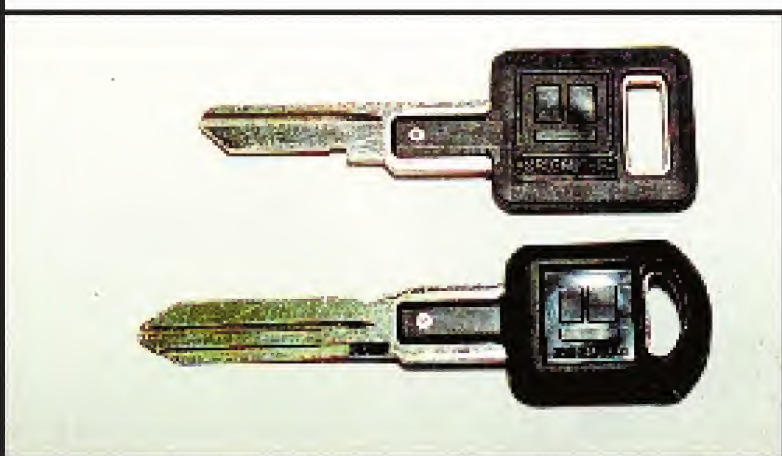
Another problem that has plagued the current PASS KEY version is when foreign material, e.g. dust or facial tissue particles contaminate the pellet, causing a break in contact between the resistor pellet on the key



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**3. ALL-LOCK replacement key blanks are available in both double sided and single sided versions.**

and the ignition lock contacts. Other examples of foreign material are excessive hand cream and even sun tan oil. PASS KEY equipped vehicles' owner's manuals point this potential problem out in the Features and Controls section.

The General Motors service manual section on PASS KEY service and diagnostics also draws reference on the importance of keeping the keys clean and dry. A quick diagnostic on a "won't start" condition is simply to substitute another known working key and see if the vehicle starts. These two situations, when properly identified, can eliminate a trip to the dealership or a costly tow. With the resistor chip mounted as the ALL LOCK replacement blank is, this problem appears to have been brought under control.

ALL-LOCK replacement key blanks are available in both double sided and single sided versions (see *Photograph 3*). The plastic coating on the head displays the familiar ALL-LOCK logo. The milling is clean and precise and can be ordered in all 15 current resistor values. Part numbers for the single sided keys are VA9801 through VA9815 and double sided keys are VA9702 through VA9715.

When generating a first key for any PASS KEY system, it is necessary for a piece of testing equipment to be able to input the various resistance values into the system's own onboard decoder module. When the correct resistance is read by the vehicle's specialized electronics decoder module, ground is permitted to the starter and the fuel injection pulse can begin. Remember, the ignition lock itself holds no resistance value, but interprets values input to it via copper contacts in the very front of the

keyway. These contacts read the resistance value from the pellet embedded in the key.

The wiring loom for the typical PASS KEY system is a two cavity connector found at the base of the steering column. After lower hush panel removal, the connectors can be separated and the locksmith's choice of PASS KEY interrogator equipment can be used.

There was a variation of this type of connector that was introduced in 1990 with certain upper priced vehicles that incorporated a 48 pin connector. The bulk head connection for this type of connector was difficult to get to and was secured together using a ten millimeter head bolt. This connector, at best, was difficult to access and required a special 48 pin adapter with a 2 cavity connector pig tail attached to it for use with an interrogator.

To combat this problem, adapters were introduced to the locksmith market that allowed the use of a short lead of wire which was outfitted with contacts that would hold a P1098AV slave key blank and could be connected via its own two cavity connector to the PASS KEY interrogator unit.

ALL LOCK has also entered the

market with their own PASS KEY adapter (see *Photograph 4*). The LT7007 Adapter Harness can be used when generating a first key. By cutting the correct mechanical key code on special plastic blanks for either single or double sided keys which are provided with the harness, the process of inputting the correct resistance code is done by process of elimination and the four minute time delay between attempts.

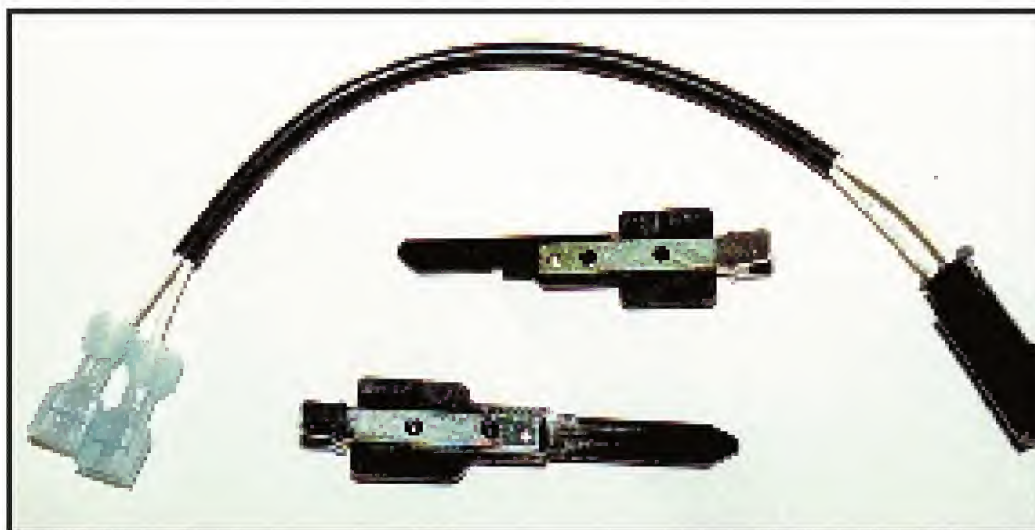
The blanks are very sturdy and have two metallic contacts to carry the input resistance to the copper contacts in the ignition lock (see *Photograph 4*). The end of the two cavity connector on the harness is then connected to the mating end of the ALL LOCK LT7000 decoder. These plastic keys can be used with other decoders as long as they have a matching two cavity connector lead.

The use of this type of adapter cuts down the amount of removal and replacement necessary to access the necessary wiring. And in the case of the 48 pin connector, the use of the adapter is a definite plus.

Replacement plastic key part numbers are LT7004 for the single sided version and LT7005 for the double sided version. Replacement keys come five to a pack and the adapter harness comes with three of each type, single and double sided.

For in depth information on products in the ALL LOCK line and up to date service procedures, contact: ALL-LOCK Co., Inc. 900 Selma, Alabama. 36701. Phone: 334-874-9001 Fax: 334-874-9011.

TRIL



**4. ALL LOCK has also entered the market with their own PASS KEY adapter. The blanks are very sturdy and have two metallic contacts to carry the input resistance to the copper contacts in the ignition lock.**





by Michael Hyde

## A Tough V.A.T.S. Job Made Easy

Since the introduction of the V.A.T.S. keyway on the Corvette, this anti-theft system has been somewhat of a challenge to the locksmith. There are common problems associated with making a mechanical key to a car equipped with this system. The first being not all locksmiths have access to the roadside companies database to get code numbers. The other is not all ignitions have a code stamped on them.

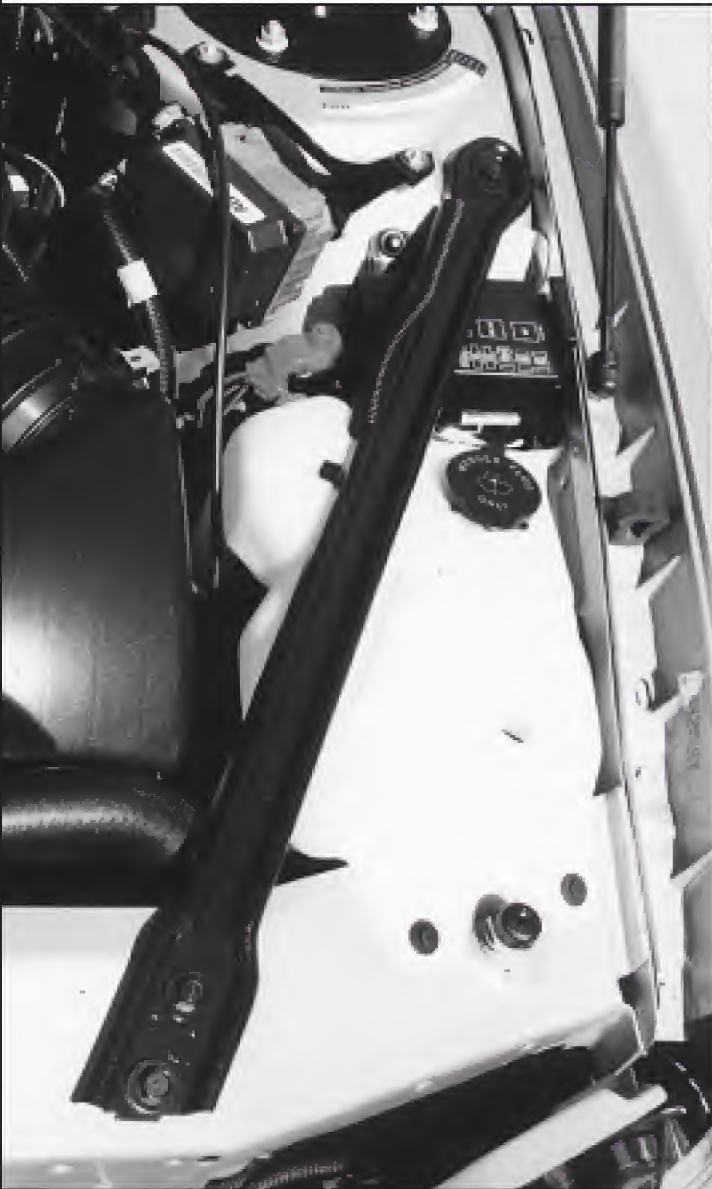
The reason that an ignition would be lacking a code number is that G.M. has strict control over the production lines at Strattec. From time to time G.M. tries to cut costs and one way is to leave the code off the locks. Now you wouldn't think there is much cost, if any, on stamping a code on a lock, but there is when you take in account that they do thousands each day.

**1. A local car dealer called up and said he had lost the keys on a 1995 Chevrolet Lumina Sedan. The first thing I did after getting to the car was write down the Vehicle Identification Number and call Chevrolet roadside. They called me back and gave me the code number and the VATS resistance value. I cut the key on an Ilco B62 keyblank and tried it in the ignition, but it did not work. I started to get that nervous feeling in my stomach. The next step is to remove the lock and check for a code on it.**



**2. This car is equipped with an Air bag and must be removed to get to the ignition lock cylinder.**





**3. You must disconnect the battery and tape the terminals to prevent accidental re-connection. The battery on this Lumina is located under the crossbeam and window washer fluid storage tank. Go to the fuse panel and remove the fuse or fuses marked "SIR" and "AIRBAG." You must now wait at least 15 minutes, once the battery and fuses have been disconnected, before going any further.**

**WARNING: Special care is necessary when handling and storing a live undeployed inflator module (air bag). Rapid gas generation, produced during deployment of the air bag, could throw the inflator module, or any object in front of inflator module, through the air, possibly causing serious injury. When carrying a live inflator module, ensure bag and trim cover is pointed away from the body. When placing a live inflator module on a bench or other surface, always face the bag and trim cover up and away from surface so space is provided to allow air bag to expand in case of accidental deployment. Also, never carry an air bag or components by wires or connectors.**



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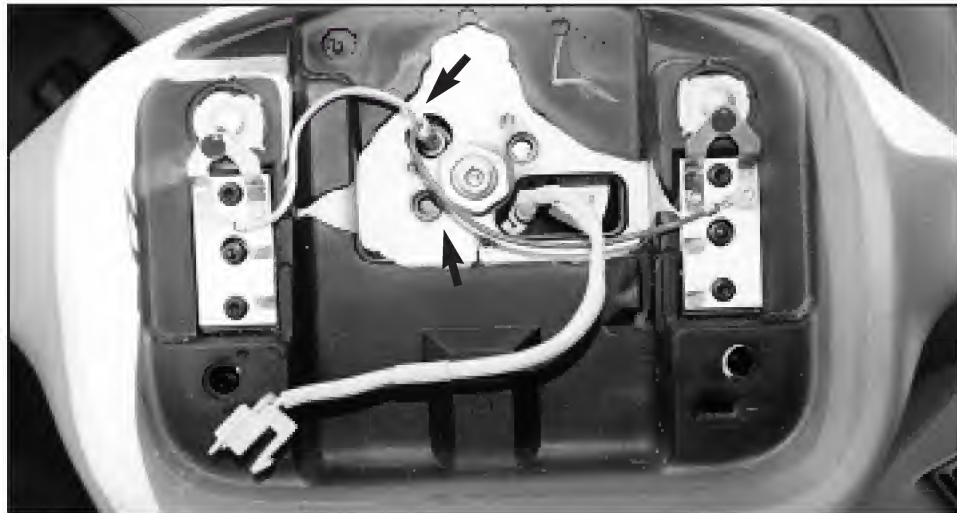


**4. The air bag is held to the steering wheel by two #30 Torx screws. The screws are recessed into the wheel about 1-1/2" to 1-3/4". A special tool is required if the turn signal shroud cover blocks one of the access holes.**



**5. Once the air bag has been unbolted it will be necessary to unsnap the electrical connection. General Motors uses a special insert into the connector that is usually green in color. This green insert is there to lock the connector together. Unsnap the green insert before attempting to unsnap the air bag connection.**

**6. Disconnect the horn contact by pushing in slightly and turning it to remove. Remove the steering wheel nut and use an appropriate puller to remove the steering wheel. Remember to not tighten the puller bolts more than three turns into the wheel, so as not to cause damage to the plastic air bag clock spring unit behind it.**



**7. Behind the steering wheel is the air bag clock spring unit. A Tru-arc ring that has to be removed holds it on.**

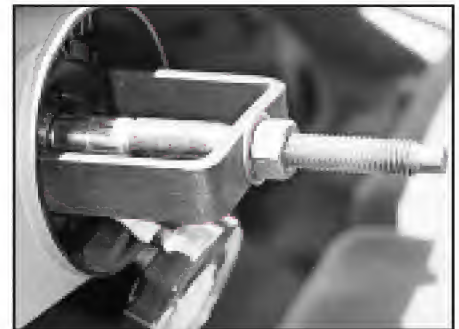


**8. As a precautionary practice I always tape the inner portion of the air bag clock spring unit with the outer portion. This will ensure that the unit will not come out of sequence when sliding it on and off the steering shaft. Care should be taken when handling this unit.**

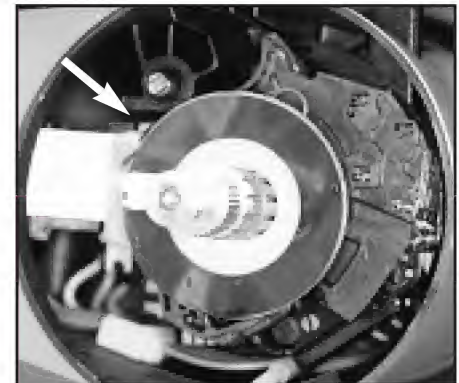




**9. Gently slide the air bag control unit off the steering shaft. The compression plate must be removed. The plate has a wave washer in front of the plate-securing ring. Remove the wave washer.**



**10. Use an appropriate G.M. compression plate tool to compress the plate in order to remove the "pain-in-the-neck" securing ring.**



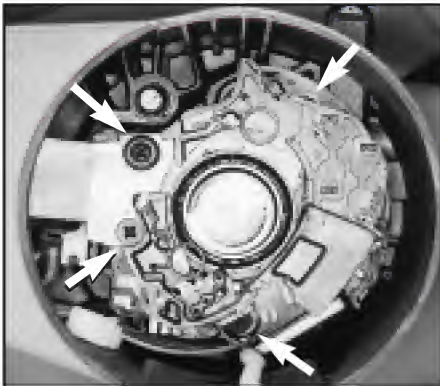
**11. Under the compression plate is the horn contact ring, slide it off.**



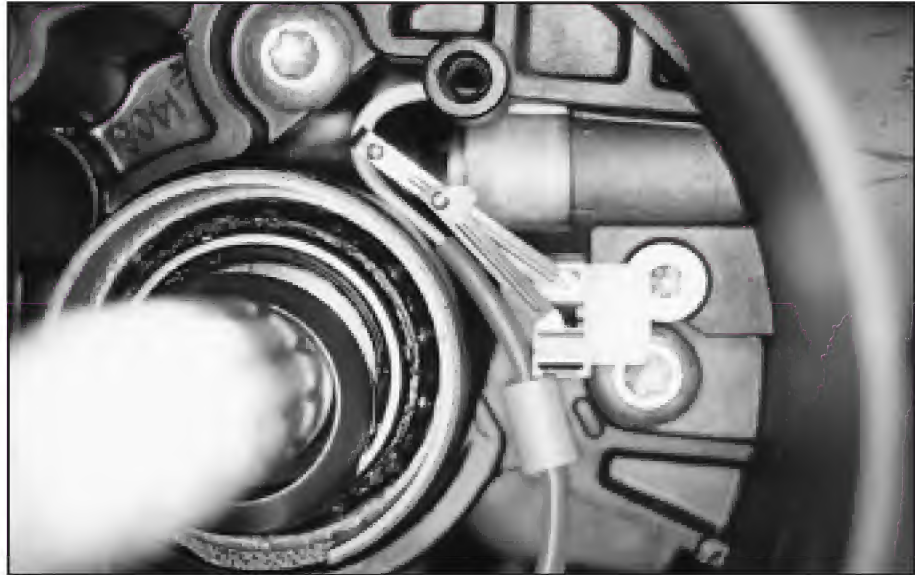
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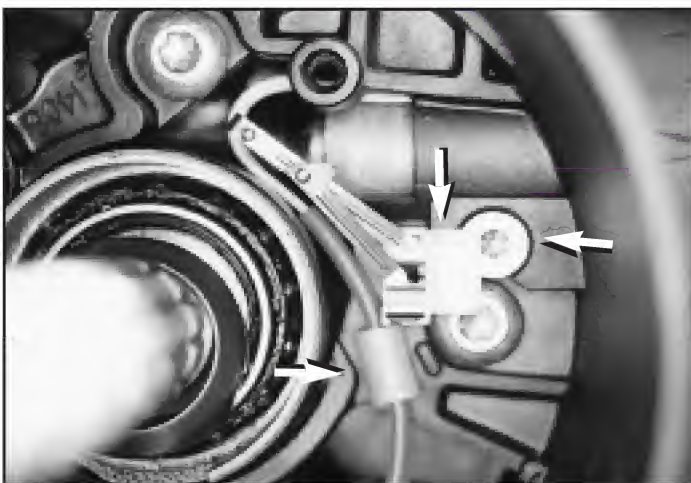




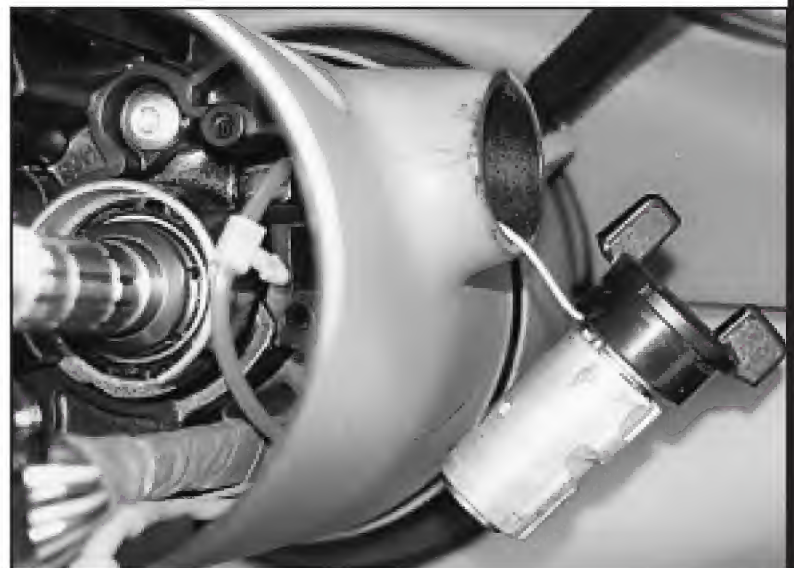
**12.** The turn signal assembly will have to be unfastened and pulled off the steering shaft in order to gain access to the ignition lock. Remove the two Phillips-head screws that hold the turn signal arm. Underneath the turn signal arm is another screw that must be removed. Remove the other two screws located at about 1 o'clock and 6 o'clock.



**13.** The turn signal assembly can now be gently pulled off the steering shaft lay to the side.



**14.** Before doing anything else, stop and observe how the VATS wires are attached to the inside of the column. Use a pair of needle nose pliers to grasp the buzzer switch and remove it. Next, there is a rubber fastener on the VATS wires that attaches to the inside of the steering column right below the buzzer switch. Gently pull out the fastener, this will give you more play in the VATS wiring. The ignition lock cylinder is held to the column by a Torx screw, remove the screw.



**15.** The ignition lock cylinder removed from the column and still attached by the VATS wiring. This lock is Not stamped with a code.



**16.** Since there is no code on the lock, we enlist the help of a tool called the "Sectorater-GM," made by Advanced Locking Systems in Arizona. This tool is made as a holding fixture to aid the process of disassembling a 6-cut, bolt retained modular ignition cylinder whether on the workbench or on the car with VATS.



**17.** The Sectorater with the included ignition-housing sleeve bolted on.





**18. There is an extra groove in the lock cylinder opening to allow safe passage of the VATS wires. Make sure the wires are in that groove before sliding the Sectorater in place. The ignition slides in from the top to rest in the tool.**



**19. The tool in the correct position on the column. Hand tighten the black Allen head bolt so it fits in the groove of the cylinder housing where the column bolt would normally be.**



**20. Use a 3/32" pin punch in the access hole to knock out the cylinder wedge. The wedge will come out the side so you can remove it.**

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**21.** Now that the wedge has been removed, tighten the bottom bolt to unfasten the plug and the stop cam.

**22.** With the plug and stop cam unfastened this will lift the plug up so you can slide it out of the cylinder housing.



**23.** It is now possible to "rake" the tumblers, depress the sidebar, and decode the tumblers to make a working key. Re-assembly of the lock cylinder would require that you re-insert the cylinder wedge and then tap back on the stop cam to the rear of the cylinder. The Sectorater has made a tough job a little bit easier. The Sectorater is available from National Auto Lock Service @ 800-954-5454.

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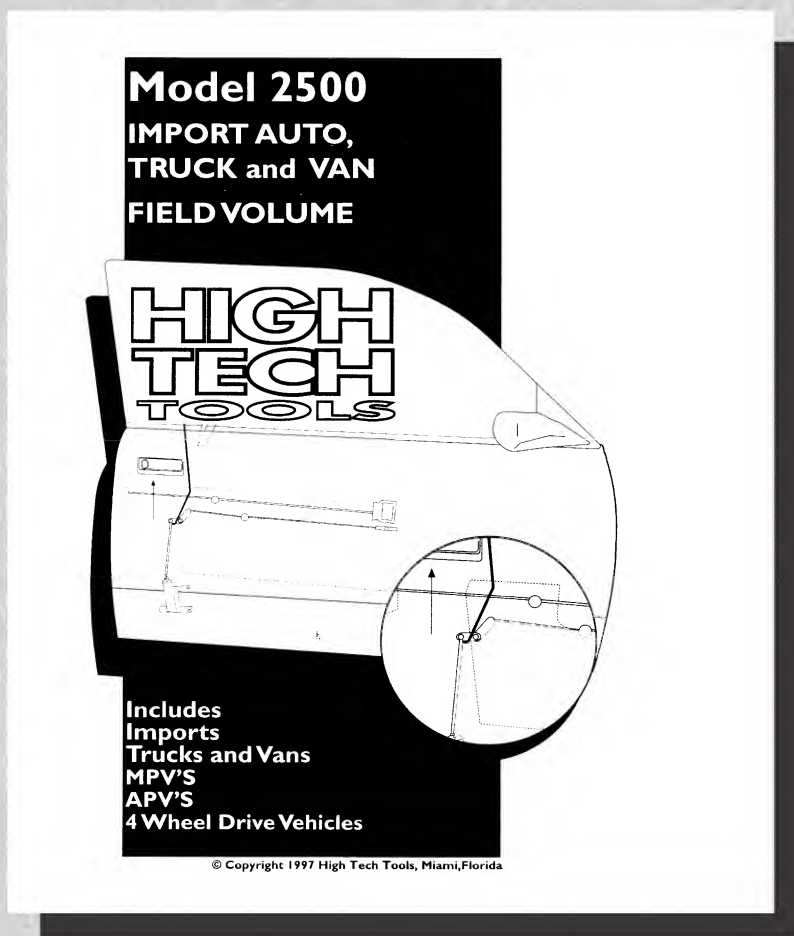
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# High Tech Tools Car Opening Encyclopedia



**T**he High Tech Tools car opening encyclopedia is a massive set which is conveniently divided into four (4) volumes, each containing its own specific information.

The opening instructions are divided into two volumes. The first volume is the Domestic Opening Volume, featuring openings for all domestic cars. The second volume is the Foreign Cars and Trucks & Vans. The second part of this volume contains openings for trucks and vans both foreign and domestic.

The opening manuals begin with a numbered, step-by-step opening procedure for each automobile listed. Each vehicle opening is also accompanied by a computer generated illustration of the door and lock system. If that is not enough, almost every automobile also has photographs demonstrating the step-by-step opening procedure.

The third book of the four volume set is the Information Volume. This volume gives the locksmith valuable lock information. Finally, the Service Volume covers assembly and disassembly of steering columns, including those with air bags, and other technical information.

The Economy Set has all the tools and the opening manuals, available for \$139.95; The Regular Model 2500 has all the tools, the opening manuals and the Information and Service Manuals (as well as a few other goodies, like a video tape demonstrating openings) for \$189.95; and the Model 2500 Pro Set is just like the Regular Set, except that the tools are in chrome and the price is \$214.95. For more information contact: High Tech Tools, 1400 Southwest 1st Street, PO Box 450370, Miami, FL 33135. Phone (800) 323-8324, Fax (305) 541-0074.



NISSAN 1

Nissan 200SX 1996-97

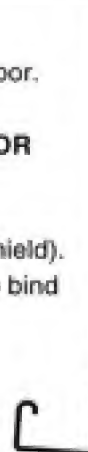
**INSTRUCTIONS**

Opening Instructions

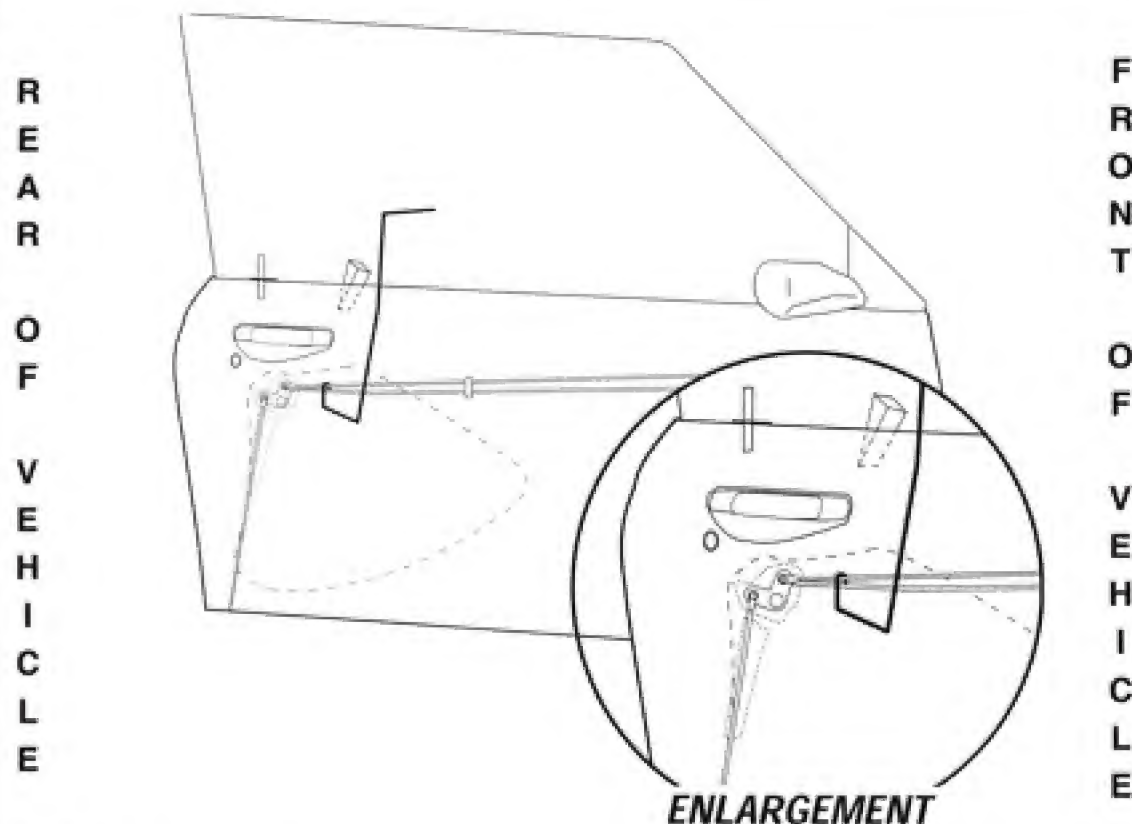
**Tool : Reverse Hook Tool (1842NC)**

1. Separate glass from weather-stripping with a wedge on passenger door.
2. Point tip of tool towards rear of car.
3. Lower the tool into car below linkage guard and linkage (**SEE FIG. FOR POSITION**).
4. Rotate tool so handle points away from the vehicle.
5. Lift up on tool and hook linkage (note: you are reaching behind the shield).
6. Twist tool so handle points towards the front of the vehicle in order to bind the linkage.
7. Rock tool so that the linkage move towards the front of the vehicle.

**NOTE:** In order to remove the tool, first lift tool completely off the linkage, rock tool so tip moves towards inside of door panel, lower tool, rotate it and lift up.



**DIAGRAM**



MM2-B-6

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NISSAN 1		NISSAN 200SX	
<p>REAR OF CAR</p>	<p>FRONT OF CAR</p>	<p>REAR OF CAR</p>	<p>FRONT OF CAR</p>
<p><b>1</b></p> <p>NISSAN 200SX</p>		<p><b>2</b></p> <p>Tool in insertion position.</p>	
<p>REAR OF CAR</p>	<p>FRONT OF CAR</p>	<p>LOCK LINKAGE</p> <p>TOOL</p> <p>FRONT OF CAR</p>	<p>LOCK LINKAGE</p> <p>TOOL</p> <p>REAR OF CAR</p>
<p><b>3</b></p> <p>Tool in working position.</p>		<p><b>4</b></p> <p>View from inside the door.</p>	
<p>LOCK LINKAGE</p> <p>TOOL</p> <p>FRONT OF CAR</p>	<p>LOCK LINKAGE</p> <p>TOOL</p> <p>REAR OF CAR</p>	<p>LOCK LINKAGE</p> <p>TOOL</p> <p>FRONT OF CAR</p>	<p>LOCK LINKAGE</p> <p>TOOL</p> <p>REAR OF CAR</p>
<p><b>5</b></p> <p>Twist tool in order to bind lock linkage.</p>		<p><b>6</b></p> <p>Twist tool to move linkage towards front of vehicle</p>	



# Newman Tonks *Delayed Egress*



by Lucinda Woodward

**O**ver the years, security has evolved into a far more complex function than keeping intruders out. In today's high-security building, controlled egress means monitoring unauthorized entrance and exit, while allowing free access to outside doors in case of fire or emergency. Enter the delayed exit, a solid-state electronic security device that solves both life safety and security problems by controlling unauthorized egress yet releasing immediately in the event of a power failure or emergency alarm.

Prior to the development of the delayed exit, the only way door hardware manufacturers could provide controlled egress was through the use of an external electromagnetic lock and panic device combination, that would open automatically when the power supply was shut off or a fire alarm was triggered.

The delayed exit device takes security to a new level by integrating the magnetic lock into the exit device so that when the pushbar is depressed for 3 or more seconds, an irreversible local audible alarm and lock sequence is activated. The device remains locked for an additional 15 second time delay (30 seconds is allowable in some states), giving security personnel time

to prevent unauthorized persons from exiting. At the end of 15 seconds, the latch bolt will retract, allowing anyone to pass through the door. The alarms will continue until the device is reset. During a power loss, the delayed egress operates like a conventional exit device and doors can be opened by simply depressing the pushbar.

NT Monarch, of worldwide Newman Tonks, manufacturer of one of the most extensive lines of panic and exit devices in North America, rolled out its latest edition to its electrified hardware product line—the DE-18—just last year (see *Photograph 1*). According to Bert Johnson, AHC general sales manager for NT Monarch, the NT Monarch Delayed Exit was developed in response to customer demand for an exit device that would comply with National Fire

Protection Agency codes (mandating free access to fire doors) yet would still provide a high-security environment.

"The DE-18 is an extremely flexible product. There is a high demand for the device in hospital, institutional and commercial settings where some

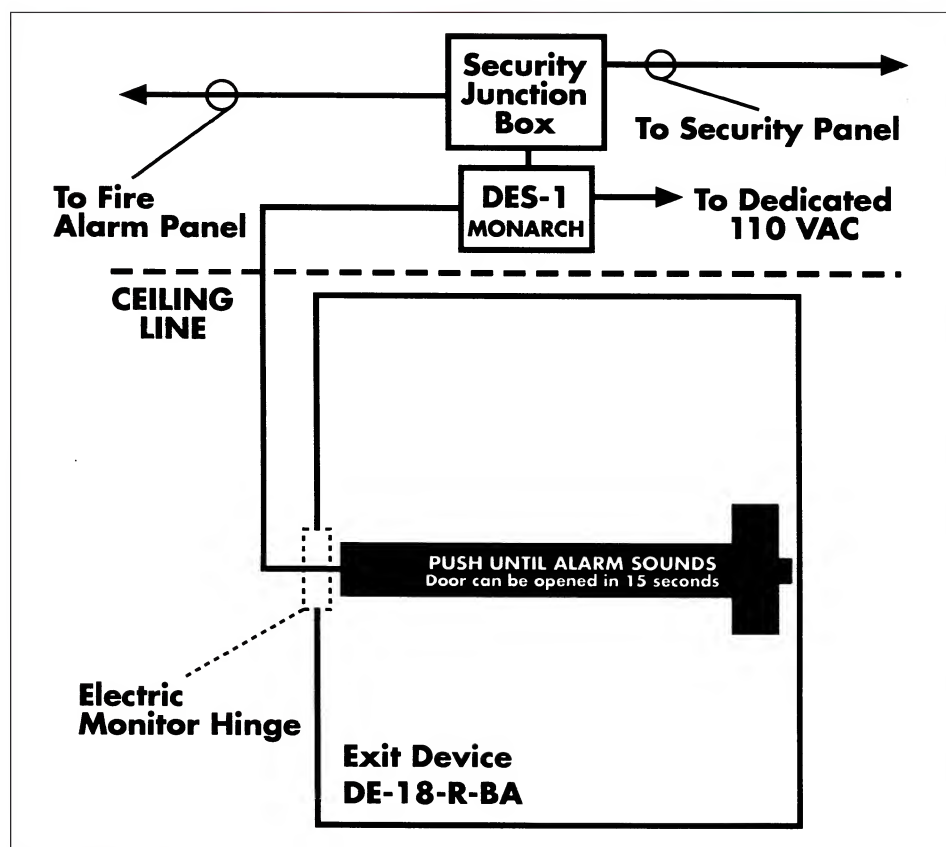


**1. NT Monarch manufacturers of one of the most extensive lines of panic and exit devices in North America. Its latest edition to its electrified hardware product line is the DE-18.**



**2. The new NT Monarch DE-18 features fire alarm contacts, key switch operation (allowing arming, disarming or resetting the system by mortise cylinder), LED device status indicator, remote alarm contacts, internal alarm horn and a choice of standard device trims, functions and applications.**





**Illustration A.**

degree of access control is mandatory. Hospital security often utilizes a delayed exit device on fire doors to reduce liability, which might arise from patients leaving the ward in a confused state. There are so many applications for use of the delayed exit.

The new NT Monarch DE-18 features fire alarm contacts, key switch operation (allowing arming, disarming or resetting the system by mortise cylinder), LED device status indicator, remote alarm contacts, internal alarm horn and a choice of standard device trims, functions and applications (see Photograph 2).

NT Monarch has improved on the design of the standard delayed exit device in its DE-18 product. It is now easier to install and use than ever before. New technologies in electrical engineering have allowed us to install an advanced circuit board in the power supply so that all connections are in a common location, out of the way of daily traffic.

The NT Monarch DE-18 features sleek styling of the modern pushbar design, eliminating crossbars and arms, which allow for a streamlined low-profile installation (see Illustration A). All 18 Series devices are available in panic exit or 'A' label fire exit construction and are furnished in

stainless, brass, bronze or architectural finishes for rim, mortise or concealed installations. NT Monarch's Delayed Exit is manufactured and tested to exceed ANSI A156.3-1994 and A156.24-1992 Grade One standards and meets all requirements for NFPA 101, Special Locking Arrangements.

**T**he most common installation for the delayed egress is in a moderate to high-security convalescent care or hospital application with special needs patients, but business owners and door hardware specifiers ought to be aware of some of the other potential applications for this type of device

Retail stores or commercial operations that cover a large area but have limited staff may encounter problems with theft. The delayed exit is an excellent means of monitoring unauthorized exit from back doors, thus controlling pilferage."

After installing a delayed exit device in a sporting goods store in California that had a tremendous problem with shoplifting, it was quickly controlled. The thieves would drive up in a van and park near the back door. One person would go in the front door, grab merchandise and exit out the back before the employees could intervene. It was recommended that the store

install a delayed exit to slow the thieves down and sure enough, after installation the problem ceased immediately. Fifteen seconds was just long enough for security to catch the shoplifter with the merchandise in hand.

The delayed egress is ideal for applications where the need for security conflicts with life/safety issues. In one application, the installation of a DE-18 to prevent employee theft at a computer chip manufacturing plant was recommended. The company was losing a great deal of revenue through internal property loss, a delayed exit device together with a card key access unit on both the inside and outside of an exterior door to prevent unauthorized exit was installed. The card key unit allowed employees with the proper identification to pass through the door uninhibited, but if someone attempted to exit the building without a card, the alarm would sound and the 15-second timed delay would kick in to prevent immediate egress."

The delayed exit device is being employed increasingly with enhanced security systems because card swipe access can generate an audit trail that tracks all traffic through a door during a specified time period. Such systems can be employed as property loss prevention devices and/or preventative liability features.

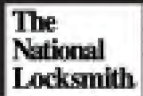
Security systems are so relevant to current technology, that it is imperative contractors and specifiers become more familiar with their benefits. The security industry is changing drastically and the cost of electrified hardware has dropped almost 25%. As the price continues to drop, more people will want access to this technology."

Another benefit of the NT Monarch DE-18 is its compatibility with CC TV—a surveillance camera that can be initiated by the output of the triggered delayed exit device. Together the security units provide outstanding theft prevention in restricted areas of commercial buildings.

**S**ecurity, like technology, will continue to evolve, and the NT Monarch DE-18 is poised to fill the security needs of the future. Specifiers of the future must broaden their perspectives of exit device application. The uses for the delayed exit are limited only to the imagination."

For more information on the DE-18 Delayed Egress device by Newman Tonks, call: 800-826-5792. **NTL**





# I Am Listening



by Dale W. Libby, CMS

**T**his article will cover the use of a virtuoso listening device called the Safe Snooper. We will discuss listening devices in general and how they enhance and simplify safe work, including diagnosis and manipulation.

Locksmiths and Safe Technicians use the power of hearing in their everyday work, and they are probably not aware of it. For example, when picking locks, hearing determines the easiest direction to pick a lock.

After inserting a turning tool and applying pressure and light picking motion, the pressure is released from the turning tool and one listens to hear the pins or wafers drop back to the neutral position.

The same test is used when the turning tool is inserted and pressure is applied in the opposite direction. Usually, the lock picks easier when there is more clicking when the turning tool pressure is lessened. If there is no sound, then no pins/ wafers are hanging up. The cylinder usually turns in the 'loudest' direction.

The use of a listening device is magnified in safe work. There are endless uses for a quality listening device. The Safe Snooper is manufactured and designed by and for TIMEMASTER of Topeka, Kansas. It is gated or filtered in such a way that extraneous readings are not heard (see Photograph 1).

The Snooper does not have a traditional On/Off switch. Instead,



**1. The Safe Snooper, transducer and the microphone came in a custom carrying case.**

when plugging into the transducer, the unit automatically powers up and a green diode lights up. There is a very sensitive gain control which should always be set at a minimum when starting.

**A** transducer is a device that changes one type of energy into another type of energy. It is really not a microphone. It is much more sensitive.

A secondary plug in jack is for a pair of headphones, and there is

another one for a transformer if the internal 9-volt battery is not used. The transducer is magnetic and attaches strongly to the face of the safe or chest you are working on. It comes in a nice carrying case.

Once you start using the Snooper, you will not go on a safe job without it. Let us cover some areas that the listening tool is invaluable.

## Diagnosis

One of the best tools to use in safe opening is your brain and all your





other senses before breaking out any hardware. Sight, touch, feeling, and sound are very important to ascertain exactly what is needed on a locked or malfunctioning safe. After initial diagnosis, then tools can be used to amplify our physical senses, employed to heighten or confirm our thoughts.

Sound is very important in safe work, especially on a sick or injured combination lock. A good listening device can be used to determine if there is communication between the dial and combination lock. It can be used to count the wheels on locks where the touch is very light. It can 'hear' the wheels picking up (hopefully) and tell if all the wheels are turning.

Recently I was called to estimate the opening on a high security money chest. Before I quoted a price, I used the Snooper and concluded that none of the wheels on the S&G 8500 Manipulation Proof lock were picking up, in either direction. Since this foreign ISM Vault employed glass plates, and the lock was not working, I priced the job accordingly for a side penetration. Time and aggravation saved.

### **Manipulation**

The art of manipulation makes use of all senses, especially sight and

touch. Having a steady or constant 'touch' is the one mainstay of safe combination lock manipulation. Unfortunately, this is one area of instruction that is the hardest to teach and maintain as we grow older.

**W**ith the use of the Snooper, the touch factor can be changed to the 'click' factor. By using this listening device, a consistency is always there and the graphing of the opening chart is much more accurate. Consistency is the hallmark of competent manipulation.

All one has to do is stop and take

the reading when the click is heard. Since I use only one edge of the opening cam to indicate, the perfect touch is needed and required.

I recently went out to open a safe with a "L" handle and a YALE combination lock (see *Photograph 2*). By turning the lock I determined that the lock was a Yale Roller bolt type lock. Traditionally there is only one contact point with this type of lock configuration.

I attached the Snooper between the handle and lock, and the contact readings became very clear (see



**2. At the time this was an unknown safe with a "L" handle and a YALE combination lock**

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Photograph 3). I literally dialed the safe open in about 10 minutes. Both the customer and I were impressed. The safe in question was a Globe Wernicke (see Photograph 4).

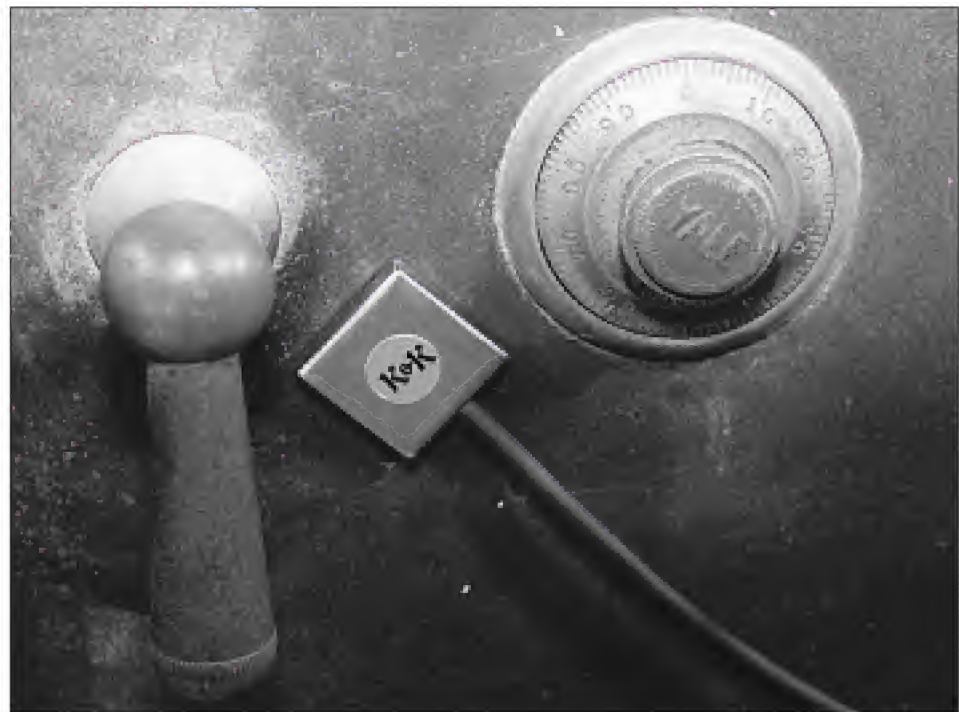
### **The Yale OC5**

This lock is a diabolical piece of workmanship and very popular in ancient safes. The lock turned out to be an OC5 manufactured by Yale (see Photograph 5). I can hear you moaning, "but what do I do if I do not have a Safe Snooper?" Well, there are several different attacks, other than manipulation that will work, however manipulation is the best offensive. I assimilated manipulation through the Lockmasters correspondence course and the skills that I have learned made a lifetime of safe openings easy and very profitable.

Without manipulation, this lock poses some very hard problems. Without exact drilling positions, you could very well damage the lock and destroy any chance of repairing the safe. Before going on to the more drastic measures of drilling, I would like to briefly discuss manipulation of this style of geared roller fence lock.

To do so you must first understand the basic design features of this lock. One unique design feature is that this lock incorporates a friction fence which is gear driven. There is a fixed gear attached to the bottom of the drive cam and a friction gear under the fence.

By turning the dial to the right, it causes the fence gear to rotate left which causes the fence to turn away from the drive cam and wheels. By turning the dial to the left, it causes the fence gear to rotate right which causes the fence to turn towards the drive cam and wheels. You will only



**3. The Snooper positioned between the handle and lock for manipulation.**

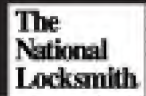


**4. I literally dialed the safe open in about 10 minutes which turned out to be a Globe-Wernicke.**



**5. The lock turned out to be an OC5 manufactured by Yale. One unique design feature is that this lock incorporates a friction fence which is gear driven.**





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#### Continued from page 52

hear and feel a contact point on this lock when the dial is turned to the left.

In *Photograph 6*, I have reversed the drive cam so the gearing is apparent. The gear on the roller fence can be seen in *Photograph 7*.

Although this looks complicated, the lock is very easy to manipulate. When the numbers (gates) get under the fence the readings go down, and the contact area gets stronger. If you cannot manipulate, then drilling is your only option, and this is a dangerous prospect at best.

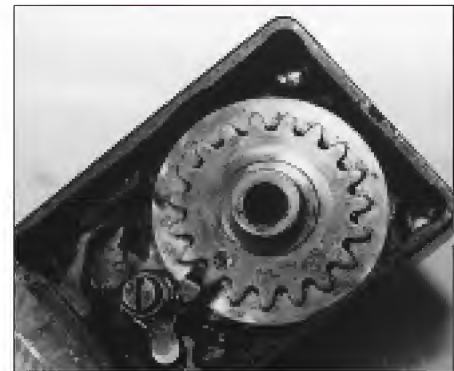
#### Drilling

The lock measures 2-1/2 inches by 2 inches and is 1 inch thick. This is a very small footprint, and retrofitting it with a modern Group 2 lock would be an effort, even if it could be done. The lock is 'tubed' and held on to the door with a 1-1/4 inch ring nut. The lock case has a location stud on the underside of the lock to hold it perfectly in alignment with the opening cam.

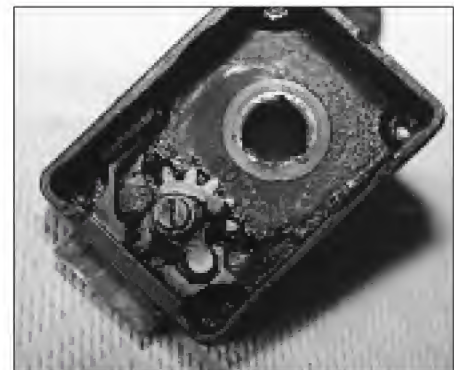
The distance between the center of the dial and the center of the handle is 3-1/2". The dial and ring are 2-1/2" in diameter. A small target area. The name "YALE" can be removed from the center of the combination dial by holding the dial and tapping the YALE hub with a small punch. It will unscrew from the dial revealing the end of the dial spindle with a flush spline key.

**I**n theory, the dial can be removed if one removes the spline key, however this is not only hard to do, it is counter-productive. Drilling under the dial, or outside the dial ring all pose one great problem. Any intrusion into the lock case may destroy a part of the lock mechanism. This is something you do not want to do. Replacement locks are hard to find, if not impossible. Retro-fitting without welding apparatus is not cost effective, not to mention price practical.

If I were to drill, I would probably drill at 3:00 o'clock outside the lock case and angle in to see the edge of the wheels from the side of the lock case. Dave McOmie suggests in his safe opening books to drill in just above the gears between the drive wheel and the roller cam. There is a small area here that is safe to drill into. Very dangerous. The drop in



**6. I have reversed the drive cam so the gearing is apparent.**



**7. The gears on the roller fence can be seen.**

position is approximately 75.

The direction of the turns is 4 times right to "X," 3 times left to "X," 2 times right to "X," and left to STOP. Take this into account when you are manipulating.

#### Conclusion

In conclusion, any tool that can be used to simplify and speed safe work is a plus. If you have never used a listening device, amplifier, or other tool to heighten and intensify readings, you are in for a treat. Plus, as we get older, our senses seem to get a little coarser and our eyesight gets weaker. These tools, unfortunately, or not just a luxury, but a real necessity. This tool, The Safe Snooper, is a prime example of a good tool made specifically for the Safeman, by an expert Safeman Dan Graffeo of TIMEMASTER.

**D**o not short change yourself. Get a good tool at the start. Quality will win through. Remember that when purchasing any tool.

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For Further Information Contact:  
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FAX: 800-798-TIME.



# Quick Entry

## UPDATE

by  
Steve  
Young



### Ford Escort ZX-2

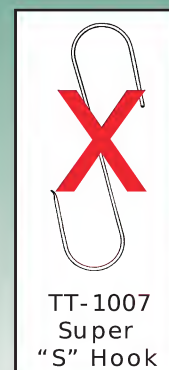
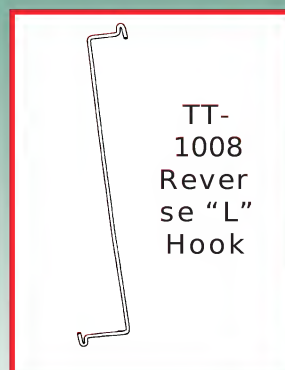
Welcome to "Quick Entry Update" by Steve Young. The goal of this column is to answer questions about car opening.

In this column I will address the Ford Escort ZX-2. This is a new two-door version of the Escort that was introduced late in the 1997 model year. Because of the late date of introduction, this car does not appear in most 1997 car opening manuals.



Like the four-door version of the Escort, the ZX-2 is equipped with vertical inside lock control buttons. However, the base of the button and most of the linkage on the ZX-2 is hidden behind the inner door skin. This means that unlike the four-door Escorts, the linkage on the ZX-2 cannot be attacked with an "S" hook or vertical linkage tool such as the TT-1017 (see tool diagram).

To unlock the car, begin by wedging open the door cavity at the base of the window near the inside lock control button. Insert a tool like the Tech-Train 1008 (see tool diagram), into the door in line with the inside lock button. Lower the tool eight to ten inches into the door, then rotate the tool to the inside of the door. Position the upturned hook on the tool directly below the inside lock button then slowly pull upward on the tool. When the end of the tool contacts the linkage rod you will see the inside lock button move. Pull up on the linkage to unlock the door. **TRL**





# Specialty Locks



## A bus P remier

### S tainless S teel P adlock 90/50

The Abus #90/50 padlock is specially crafted of high strength stainless steel alloy and features a built in shroud which provides extra protection from boltcutter attack. The stainless steel body and shackle provides excellent resistance to salt water spray and other highly corrosive elements. The durable ABUS 5 pin tumbler mechanism is manufactured from all rust free components and will resist all that the elements can throw at it. The cylinder plug is crafted from stainless steel.



The pins are anti-pick mushroom shaped and complimented by a paracentric keyway configuration. Double stainless steel locking balls add to the strength and reliability of padlock operation and resistance to prying.

## C hicago L ock I ntroduces K eyloc

Chicago Lock Company has introduced a new tamper-evident key ring for the purpose of protecting important keys. called "KEYLOC." It fits a flexible stainless steel vinyl-coated cable into



a patented ACEII cylinder, nested in a light-weight housing. It practically eliminates the loss of keys or the duplication of keys by an unauthorized person.

Keyloc holds from 10 to 50 keys and opens only to an authorized key. The vinyl-

clad steel cable is the same type used in the aircraft industry and resists cutting. Tampering is immediately evident. Key ring loops are available in three sizes: 4", 6", and 9".

## C omputer lock M ega C ablelock F or C omputers

Cyberlock in an extremely strong, effective locking device to secure computer and office equipment yet is compact and attractive enough to use in any office. Specialized steel cable is 5/16 inch wire size and cannot be cut with bolt cutters. This unique anti-theft product will decisively address your



customers' needs to the growing problem of computer theft. Installation is fast and simple. Each kit comes complete with easy instructions.



### Hurd Freezer Door Handle Locks

You might be surprised to know the Hurd Corporation has been designing locks for freezer doors for over ten years! Their engineers have worked very closely with manufacturers such as Kason Industries to design an industrial lock cylinder which will withstand extreme temperature changes, constant humidity and repeated cycle life. Just imagine how often an industrial freezer door in a restaurant is opened and closed in one day. Due to these extreme demands, Hurd Corporation has designed a very special lock. Special in every way. It has a special keyway, special tumblers, special codes and for a delightful change of pace, it is now available coded with a set of keys from Hurd Corporation.



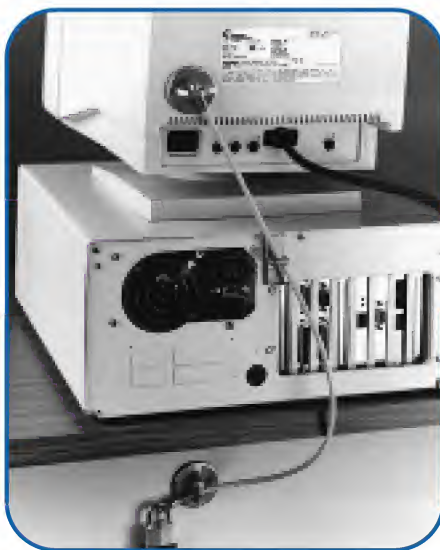
### ILD Automatic Or Dead Bolt Gate Locks

Automatic and double-cylinder dead bolt gate locks from International Locking Devices incorporate a heavy duty locking device which is cosmetically appealing and easily secures enclosed areas. The automatic lock, keyed on both sides, has self-latching and automatic action for applications which require the gate to be locked when closed. Collars have pre-set holes for tech screws to



### LOK-KIT II

This revolutionary new three plate security system is small, powerfully strong yet attractive. The distinctive cast metal plates have vinyl surfaces that are activated with Qualtec's "Super Bond" adhesive. This provides a quick easy "industrial strength" bond, with over 700 pounds (318 kgs) of holding strength. The unique low profile, extra strength LOK-KIT II enables the user to not only secure desktops computers and peripherals, but laptops, notebooks, fax machines, copiers, phone systems, audio/visual equipment, etc. This universal security kit provides asset control and deters opportunistic theft.



### McDowell-Craig Security Bar

The Swing-A-Way Security Bar by McDowell-Craig offers real file cabinet security for cabinets with or without locking capabilities. The Swing-A-Way Security Bar was designed and manufactured to prevent surreptitious entry. Constructed of heavy duty cold rolled steel, all parts are joined by heavy gauge rivets and high temperature welding, then zinc plated to harmonize

*Continued on page 59*



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Continued from page 57



with all color finishes. The device is easy to install and features an exclusive lift-up and swing-away feature. An exclusive design permits the use of adjoining cabinets whether the bar is in an open or closed position.

Designed to fit any desk or file cabinet, the Swing-A-Way Security Bar is the perfect choice where classified or sensitive information is stored.

### Monarch Key Kop //

The Key Kop II is available with a 1-1/2" (shown), and 3", 5" and 7" shackle, made of stainless steel, and aircraft aluminum, the unit provides a



secure way to keep keys together and under control. Available with choice of Medeco, Duo, Tubar, or Ace lock, and in a variety of keying patterns.

### Multi-Lock's Security Bar

Multi-Lock's swing-open security bar locks at every drawer. The multiple locking system eliminates torque and the spring-loaded hinge swings the bar clear of all openings. With Multi-Lock you have clearance

for unrestricted access to adjacent files locked or unlocked. Multi-lock can be installed without opening the file or disturbing its contents in a matter of minutes. Fits most vertical and lateral files. Available in one high through five high file drawer sizes.



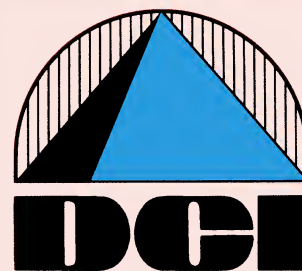
### St. Pierre Manufacturing Chain And Lock

The QuadraChain is a flexible anti-theft system with a shielded lock and square link chain that disperses the pressure of bolt cutters, sledge hammers and other typical burglary



tools. Featuring a forged steel nitride-hardened lock body and nickel-chrome-molybdenum alloy steel (SAE 8630) chain, with a vinyl covering to prevent scratching, this combination lock and chain is virtually indestructible.

Unlike traditional locks, the QuadraChain security system has no exposed U-type shank, shackle, or round chain that can be easily violated. Available in standard 1, 3, 4, 5 and 6 ft. or special lengths, this hardened square link chain is well suited for securing motorcycles, bicycles, boats, trailers, RV's, construction vehicles, and other valuable equipment. **TNL**



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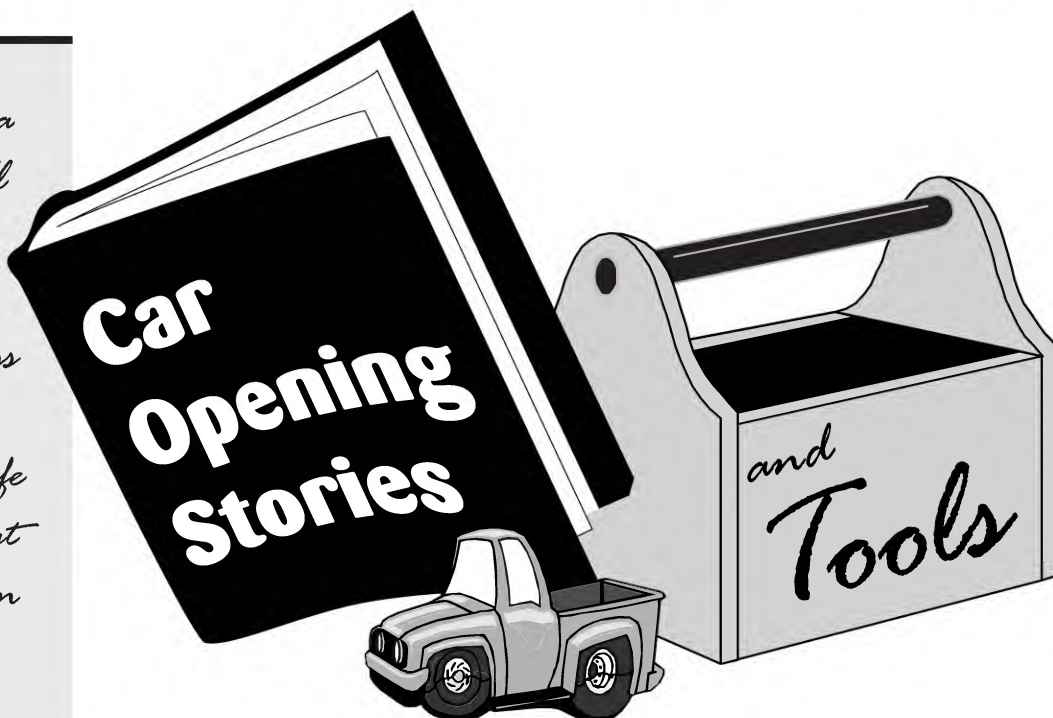
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*We all have a story to tell when it comes to dealing with the public under duress conditions. The following are real life automotive lock-out stories from those in the trenches.*



#### From: Janice C.

Went out to open an older Ford Bronco a few years ago. When I walked up to the car, the owner pointed to the keys in the ignition lock and the fact that both doors were locked. When I went over to the passenger door to open the car, the window was rolled all the way down. I reached inside and pulled up the button.

Needless to say, I had a very red faced customer.

#### From: Safe Opener

I once went to L-A-X airport to open a car. When I arrived I wedged open the door and inserted an opening tool. I soon realized that I needed more light to see and went to the truck to get an inspection light. The customer was so impatient that he starts to play with tool in the door when I hear it drop in door panel. This customer then goes to my truck to grab another tool when I shut the door on him to stop him. Now he's irate and blames me for the tool in his car door. I told him that he was caught dropping the tool in the door himself and he was not too happy about it.

Suddenly, another person that was with him opens my truck door, grabs another car opening tool and starts to SHOVE it down the door. Before you know it, he locks the tool on the linkage and can't get it out.

Enough I said. I charged them for the tools and left the job while they screamed at me the whole time. I'm not sure what they were saying, but I don't believe it was have a nice day.

#### From: Wayne Stockall

One Saturday afternoon I received a call to open a car at a senior citizens center. When I arrived with my opening tools, I quickly opened the car. When I wrote the bill, the customer groaned about my fee. I decided to give her a "senior citizen discount" and I also told her I would make her a extra set of keys at no charge, just in case this happened again.

She looked straight at me and said "Young man, I have six sets of keys to my car. Three sets are on the same ring hanging out of the ignition, two sets are

in my purse which is sitting on the seat and one set is hid under the front seat."

In other words, all six sets were inside the vehicle. I could have made a dozens sets and sooner or later, all would be locked inside. I just smiled, collected my money and had a pretty good laugh later.

#### From: Richard Dorame

A couple of years ago, I was called to open a car that a lady had been locked out of for some time, while her dog was locked inside. I got my opening tool out of my van and proceeded over to the car

### High Tech Tools Model 2500

The High Tech Tools Model 2500 is a complete set of automobile opening tools. This set comes with 31 precision lockout tools, a new four volume encyclopedia (domestic cars, foreign cars and trucks & vans, information volume, service volume), a troubleshooting video demonstration seminar, a deluxe hard cover carrying case and more. In all there is 48 pieces in tools, manuals and accessories.

The Model 2500 features door illustrations and photographs, simplifying the job of the locksmith. The Model 2500 is sold as a system, so there is no need to purchase accessories separately, although replacement items are sold to set owners.

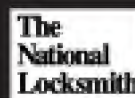
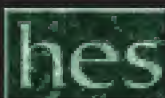


The price of the 2500 tool set is \$149.00 for the economy set, \$189.00 for the regular set and \$239.00 for the pro set.

For more information contact:  
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1-800-323-8324







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to open it. When I inserted my handy wedge into the door and was just about to put my tool down in the door, the dog jumped from the driver's seat to the passenger seat (where I was) and at the same time hit his paw on the electric lock button and unlocked the doors.

"WOW," the lady said. "Is that all it took? Boy you sure are fast!"

I never did tell her that the dog did my job for me. After all, in another two seconds the car would have been opened by me anyway.

### From: Larry Kanzer

It was 2 a.m. on a cold, Sunday, January morning. Outside, as a minor blizzard was working its way across the Northeastern parts of Pennsylvania, the Kanzer's were snuggled warm in their beds, and visions of sugarplums danced in their heads. Suddenly, the telephone screeched its incomparable "BRINNNNG" and shattered the peaceful January night!

"Is this Lots of Lock" the voice at the other end of the telephone asked?"

With much trepidation I replied "Yes, this is the locksmith, how can I help you?"

"I am on the ski slope and I locked the keys to my new Cadillac and I have to get back to New York tonight, can you help me?"

"Just tell me where you are exactly and I will be there as soon as possible" I told him.

Off I went, happily considering the price I would exact from this call, and not thinking about the possibilities of doom and destruction that could occur. One hour later, I arrived at my destination, found my customer, and proceeded to whip out my trusty car information guide to brush up on the

proper technique for opening this particular vehicle.

Brandishing my tools and light with a flourish, I had the car opened within 30 seconds and proceeded to write up the bill after requesting the license and registration.

Turns out my customer was a Doctor, and when I handed him the bill, he blanched and replied with a vengeance.

"I calculate that it took you 30 seconds to open the car, and based on your fee you are earning about \$18,000.00 an hour."

He continued with, "I don't pay my attorney that kind of money, so there is no way that I am going to pay you that bill"

I tried to explain to the him that he was not taking into account the fact that it had taken me one hour to get there, probably more that that to get home, and the innumerable hours of training to enable me to open the car that quickly. He was having none of that, and refused to pay the bill as written.

To say that by this time murder had entered my mind, and maiming was not out of the question yet, I thought about spending the rest of my young life in prison and cleverly came to another conclusion. I took the car keys that I had fortunately still in my possession, threw them back into the car, locked the door, and started walking back to my service vehicle.

"What the heck are you doing?" he shouted.

"Well, since you don't want to pay my bill, call your attorney to open the car, he's cheaper," I replied with satisfaction.

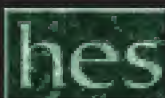
"You are crazy," he said. "He can't open this car even if he was here, which



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he isn't, and I have to get back to New York!"

"Do you want to pay my bill, or should I go home?" I asked him.

"OK, I guess I don't have any choice" he said somewhat unhappy.

"Well, now the bill is \$50.00 more" I said

"Why is that?" he asked.

"Because, I now have to open the car again" I replied stifling a grin. And yes, he did pay.

### From: Richard Cybrynski

I received a call at about 10 p.m. to open a 1996 Toyota Corolla. This should be easy, right?. When I got there, the owner related that he had called a tow company first, and the guy had been trying to open it for about an hour, but then left and told him to call someone else. When I looked into the car, a baby was asleep in the back seat.

These young parents were frantic to say the least. The handle linkage was disconnected, but I did manage to unlock the car with an across the car tool to pull the inside handle open.

While I am explaining what has to be done to repair the damage caused by the tow truck, this same tow truck operator pulls in and asks me to come open a 1996 Grand Prix about a mile away. When asked, he said he had only tried to open one door on the car. He then asked if he could get a cut for his "referral."

Another time an elderly lady with a

new Cadillac that she just picked up from the dealership found herself locked out the very next morning. I opened it with no problems and wrote a bill. As this lady was going through her purse (suitcase) for her check book, she pulls out two remote controls for the car. When I asked her if the dealer had explained what these were, she said no. After showing her how to operate the remote, I was on my way. Guess I should have asked first, but me and my mother-in-law don't really get along. Especially first thing in the morning!

### From: Mel Twite

My favorite car opening story is the time I got a call to go 45 miles south of Charleston, SC to open a 1992 Buick. I was very busy that day and it took a little over an hour to get to the location. Once I arrived at scene, I didn't bother to get out of the truck, so the customer became a little upset and asked why he wasn't opening the car.

I explained that he already owe me \$60.00 for the trip fee. If I got out of my truck to reach in the back window of his car (which had been rolled down the whole time) I would have to charge him another \$10.50 labor fee.

The customer cursed at himself, then started laughing. He paid the \$60.00 and gave me a big tip to boot.

### From: George Henderson

Got a plea for help the other day from a gent who was stranded at an interstate gas station with his keys locked inside

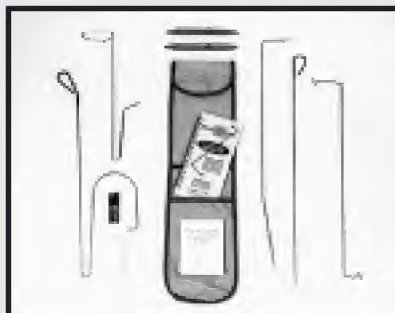
## Slide Lock Z-Tool System

Z-Tool system is an auto lockout tool kit equipped with a fully researched system manual recently updated and revised to include the newest showroom models. Complete system with tools and accessories organizes all luxury, mid-size, compact and sub-compact models whether horizontally or vertically equipped, power activated or not. Kit is updateable each year around February.

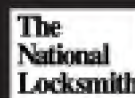
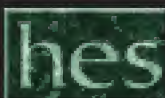
Stainless steel tools offer the user the highest of standards in the lock out industry. Only nine tools required to open the history of auto lock systems while only requiring one 134 page manual to run a lock-out business. This allows even the newest lock-out technician to quickly organize and learn the business.

Price for the Z-system is only \$189.00 + \$7.00 shipping and handling for the complete system. For further information contact:

Slide Lock Tool Company, Inc.  
1166 Topside Rd.  
Louisville, TN 37777  
(423) 577-8470  
Fax: (423) 577-5936







## PRO-LOK Lockout Tools & Equipment

PRO-LOK tools are designed for the professional locksmith. A complete line of stainless steel flat tools and oil-tempered wire tools are available in various kit configurations or individually. The brightest light in the industry, the Super Probe light uses a halogen bulb to light up the inside of the door cavity while the HardBody features a gas-filled Krypton bulb and aluminum body with black powdercoat finish. Both lights feature a unique switchless design. PRO-LOK also offers the only full color photographic lockout manuals, meaning you have the tools and information to do the job promptly, professionally and profitably. Range in price from \$75.00 to \$220.00.



For information contact:

PRO-LOK  
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Orange, CA  
92868-1311  
(714) 633-0681



his new Toyota Camry. Two locksmiths had already tried for about half an hour to open it and now he was disgusted with them and said he was asking them to leave if I assured him I could open his car. I guaranteed him I could open it if they hadn't tied the linkages in a knot.

I arrived on the scene and opened it in ten seconds. I'm not bragging on myself with this story, but I am bragging on the fact that I had the correct tool. They make all the difference in the world. Happy Openings

### From: Little Jim

It was about six months ago when I was called out to open a Ford Explorer. I thought to myself, this should be simple. I was wrong. When I got there the car was running and the lock buttons were going up and down every split second. Their was a suitcase sitting on one of the power lock buttons causing it.

Looking at the situation for a moment, I remembered that on some Fords you can lift up the handle and insert a tool to push on the locking rod and the button will go up. That's what I did and it opened.

### From: John Alwine

One of my favorite opening stories happened just recently. A Chevrolet Beretta was traveling north on the highway when the top carrier he had attached to his car opened and several lawn chairs blew out onto the highway. He stopped his car in the road, got out leaving it running, and proceeded to retrieve his chairs.

Another car, a Ford Explorer going south saw what was going on and

stopped his car — also in the road — to help the poor motorist. He jumped out of his car, leaving it running as well, and proceeded to help the man in the Beretta.

While getting out of their vehicles, both individuals locked their car doors. They were right next to one another, one blocking in the north lane of traffic and the other blocked the south lane of traffic.

As traffic backed up, the man in the Beretta walked about three city blocks and called me. I could not get very close to the cars in question because the traffic was backed up and there was no way around. When I got to the scene, traffic from my direction was back about a quarter mile.

The rest was quite uneventful, but it was funny how two motorists made the exact same mistake at the same time and location.

### From: Jon M. McKenzie

It was the end of a long snowy day and I was ready for bed, when the phone rang with a frantic lady on the line. Her car was in her garage, the engine was running, and she was locked out. By frantic, I mean FRANTIC! She was so up tight she called twice more before I could get my pants on and get out of the house, and again while I was on route.

When I arrived she was screaming, "You're taking too long! My car is going to explode!" She then proceeded to get a hammer to break the window? Despite my assurances that her car could idle all night without damage, she had hammer in hand and was ready to smash the driver's door window.

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I calmly said "Lady, it's already open," as I was putting away my car opening tool.

#### From: Drew Dailey

I was once called out to unlock a Toyota Corolla. Piece of cake, right? Just

stick in the Slim Jim, hook the linkage and pull. There's the catch, however. There's a dog locked in the car. A cute little terrier that's just so excited to see me.

Every time I unlock the door, the dog locks it back by hitting the lock button with his paw. I tried to open it real quick, but no go. I even tried to tell him to sit. He would for a second, but then he would be up on that button quicker than I could get it up.

I would swear that dog knew what I was doing and he wasn't going to let me get that \$30 easily. No sir.

Finally, I asked the owner to distract the dog by calling it over to the other side. The dog still wouldn't leave my door. Seems he took quite a liking to me, and wanted to see what I was up to.

I finally had to go over to the drivers door in plain view of the dog, stand there by the owner and slowly kneel down and creep out of sight, around the car, and up to the passenger door. Then as quietly as I could, blindly unlock the door from the ground, and pull open the door, again real quick.

This business is certainly going to the dogs. **TL**

### Tech-Train "Master Locksmith" Car Opening Tool Set

Tech-Train Productions produces one of the most comprehensive set of car opening tools on the market today. The "Master Locksmith" set includes eighteen tools, one plastic strip tool, two wooden wedges, Steve Young's "Quick Entry Car Opening Manual", The Tech-Train "Convenience Manual" and the Tech-Train "Video Manual".

The manuals included in the set cover opening procedures for virtually all of the cars and light trucks on the road today. The "Quick Entry Manual" includes an introduction section designed to teach the beginning or trainee locksmith the basics of car opening. The "Video Manual" shows how to use each of the tools in the set in close-up detail with detailed shots of the inside of each car door.

Tech-Train Productions tries to limit the number of tools in the set by only introducing new tools when absolutely necessary. Because of this, the cost of updates has averaged only \$30 per year for the last five years.



The Tech-Train "Master Locksmith" set has a suggested list price of \$239.00 and comes with a 90 day, "no questions asked" money-back guarantee.

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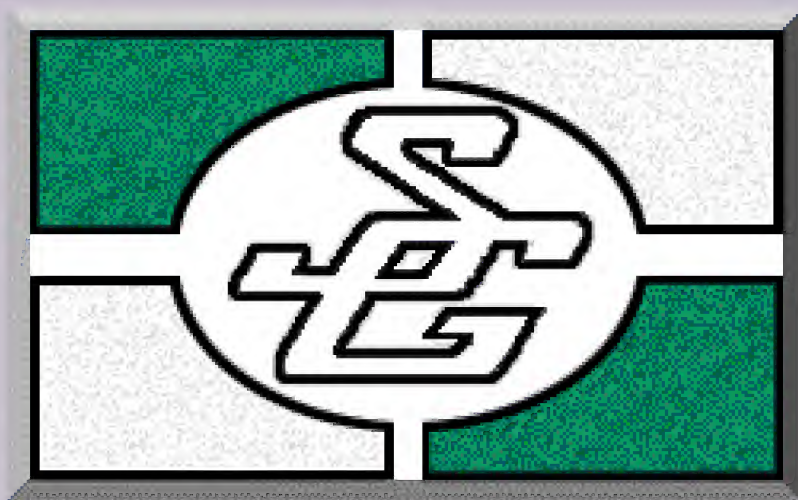
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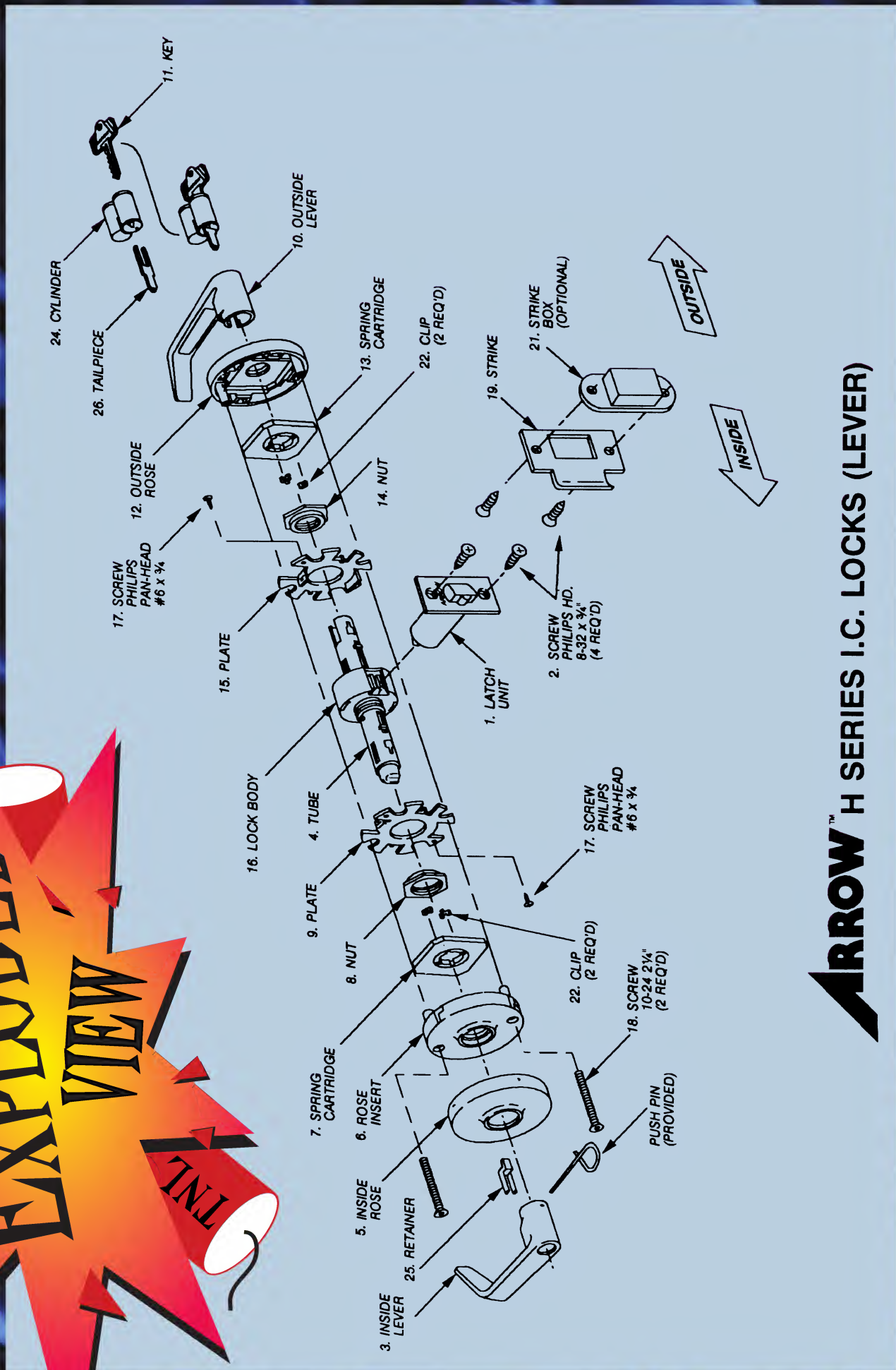
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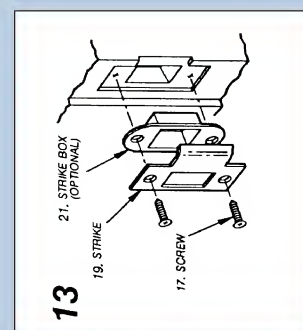
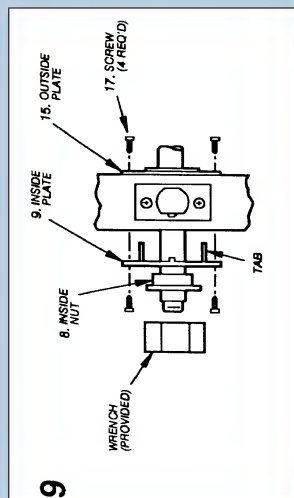
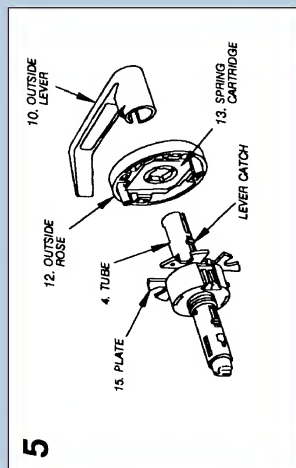
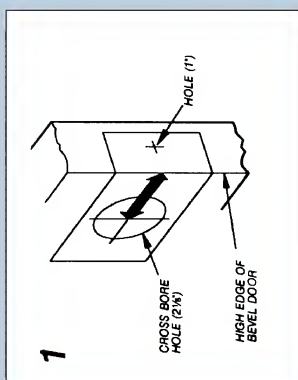
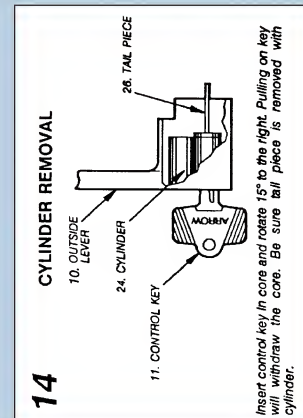
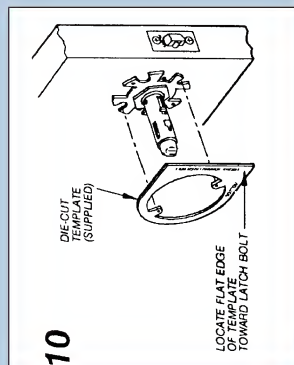
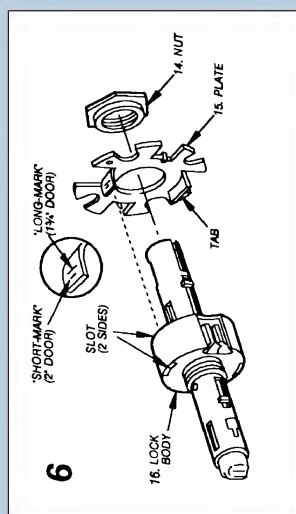
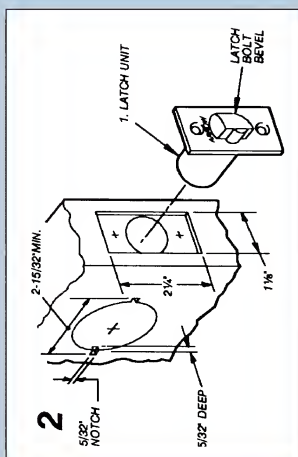
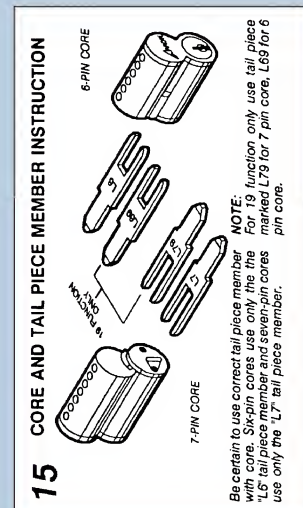
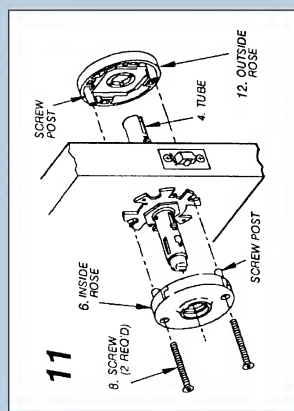
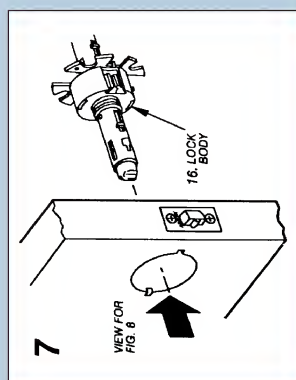
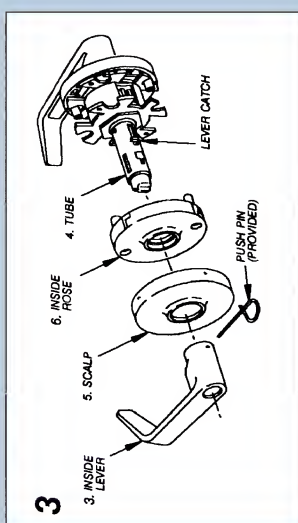
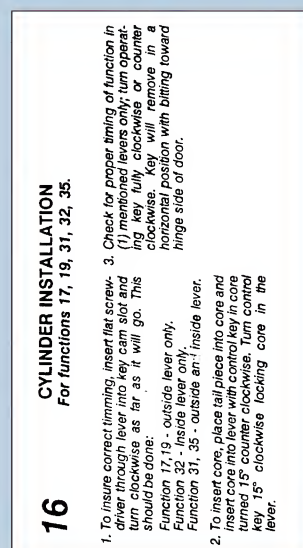
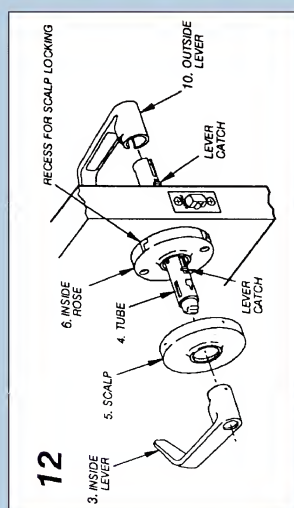
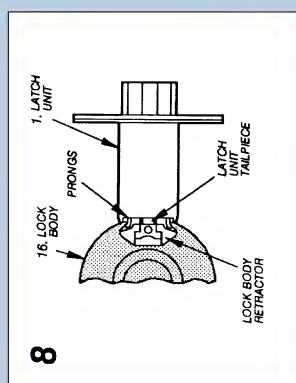
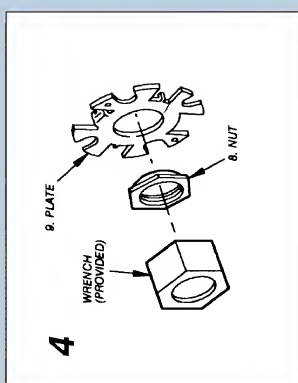
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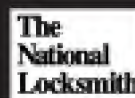
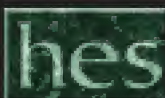


# **ARROW™ H SERIES I.C. LOCKS (LEVER)**









# BEGINNER'S CORNER

## Adams Rite Installation



by  
**Jim  
Langston**

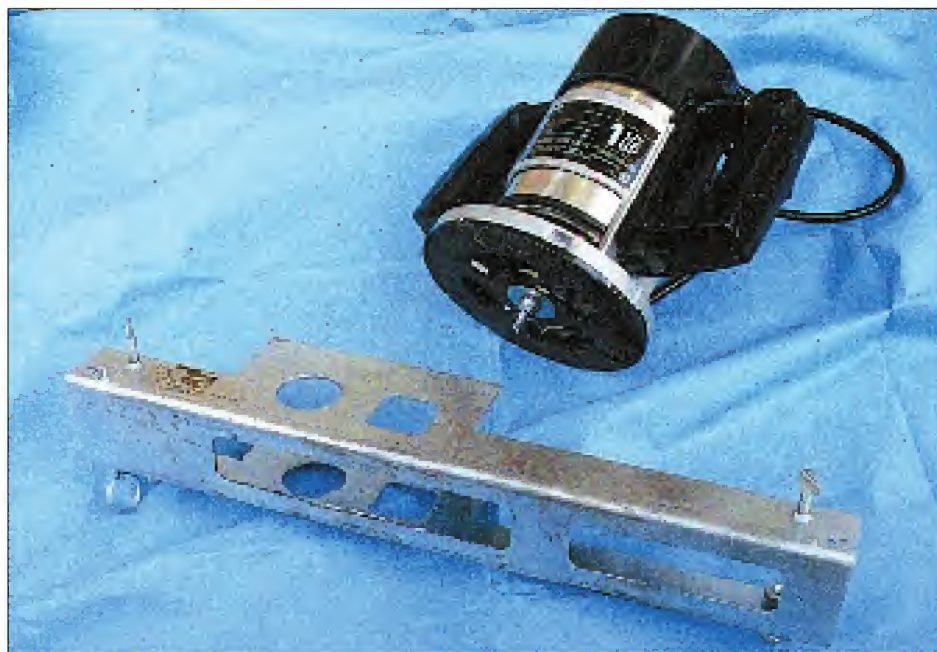


**1. The MS1850 Adams Rite Deadlock.**

**T**his month we will be covering the installation of an Adams Rite lock on a glass door using a Keedex K-TMPA/R Installation Template and a router. Even though this is the best way to install this lock, you don't have to use this kind of jig and router to do so. However, it does a very professional job. I have used a portable jigsaw and a file to do the same job, but it takes much longer to complete.

Before we get to the installation, I need to tell you about the lock. The MS1850 Adams Rite Deadlock comes in several different backsets: 7/8 inch, 3-1/32 inch, 1-1/8 inch and 1-1/2 inch (see *Photograph 1*). To measure the backset, measure from the center line of the face plate to the center line of the cylinder.

This lock features a huge bolt of laminated steel, nearly three inches long and actuated by an uncomplicated pivot mechanism. The bolt is five ply laminated steel. The center ply has an Alumina-Ceramic core to defeat any hacksaw attack, including rod-type super

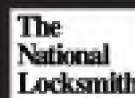
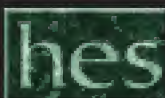


**2. The tools we used for this installation is a Keedex installation template and a router.**



**3. The Keedex installation jig is positioned on the door and then secured in place.**





*Continued from page 68*

hacksaws. The design of the lock has made it the standard of the narrow stile door industry. The length of the bolt provides maximum security for any single leaf door, even a very tall (and flexible) one or an installation where the gap between the door and the jamb is greater than it should be. The lock also comes with a hook shaped bolt that repels pry-bar attempts.

The tools we used for this

installation is a Keedex K-TMPA/R Installation Template and a router shown in *Photograph 2*.

*Photograph 3*, shows the door before the installation. The Keedex installation jig is positioned on the door and then secured in place. Once we selected the proper location, we had to drill a pilot hole for the router bit to begin the edge bore cut (see *Photograph 4*). The pilot hole needs to be at least a 1/4



**4.** Once we selected the proper location, we had to drill a pilot hole for the router bit to begin the edge bore cut.



**5.** Follow the router around the jig as shown.



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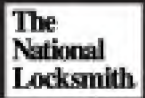
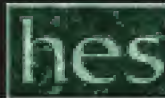
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**6. We used a 1-1/8 inch hole saw to cut the side holes for the mortise locks.**

inch hole. With the router set for cutting, insert the router bit in the pilot hole and cut the edge bore for the lock. Follow the router around the jig as shown in *Photograph 5*.

In *Photograph 6*, we used a 1-1/8 inch hole saw to cut the side holes for the mortise locks. We could have used the router to cut these holes as well, but the router bit was getting dull and the hole saws cut it just as fast.

**N**ext, put the Adams Rite MS1850 Deadlock in the door and drill a 1/8 inch pilot hole for the mounting screws that hold the lock in place as seen in *Photograph 7*. After drilling the pilot holes the screws were installed to secure the lock (screws are furnished with these locks).

**NOTE:** Be very, very careful not to drill over 1/4 inch deep. If you do, you could break the glass.

At this point you can install the mortise cylinders and secure with the set-screws in the face of the lock.

Now we are ready to cut the strike hole that the locking bolt goes in. To do so close the door and throw the lock bolt. Mark where the bottom of the bolt hits the jamb when it starts to extend. Then open the door, throw the lock bolt and mark on the jamb where the top of the bolt is when fully extended. The



**7. Put the Adams Rite MS1850 Deadlock in the door and drill a 1/8 inch pilot hole for the mounting screws that hold the lock in place.**

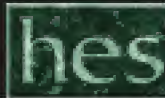


**8. The bolt hole is cut with a reciprocating saw.**

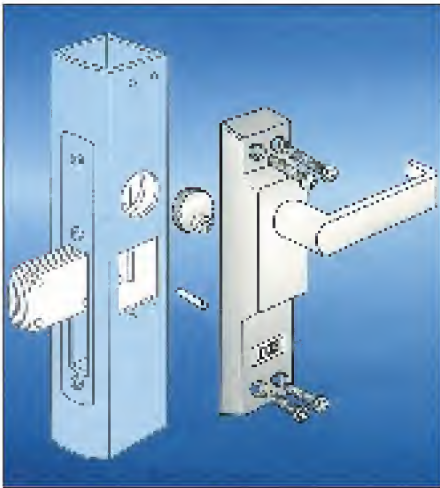


**9. After installing the faceplate the job is finished.**





Continued from page 78



**A. The MS Lever is simple to install requiring only six holes be drilled.**



**10. If emergency egress is needed, Adams Rite offers the MS Lever.**

bolt hole is then cut with a reciprocating saw as seen in *Photograph 8*. After you have the bolt hole in the jamb, you are finished installing the Adams Rite lock. Install the faceplate and the finished job is shown in *Photograph 9*.

The only shortcomings of the MS1850 when fitted with mortise cylinders is that a key is needed to lock and unlock the bolt. If emergency egress is needed, Adams Rite offers the MS Lever (see *Photograph 10*). The MS Lever is simple to install requiring only six holes be drilled (see *Illustration A*). Three pounds of downward pressure is enough to retract the bolt and a short upward pull returns it to a locked position. When the handle is released it always returns to the



**B. One such replacement lock is the 4730 Deadlatch series.**



**C. A 4590 Latch Paddle Device.**



**11. One of three Latch Handle offerings such as the 4560.**





horizontal position.

Besides the MS1850 Deadlock, Adams Rite manufactures a number of locks for various applications and replacement needs. One such replacement lock is the 4730 deadlatch series (see *Illustration B*). The 4730 deadlatch is designed to fit, without alterations, the stile cutout for the MS1850 series deadlock of the same backset. It does not provide the same level of security as the 1850 deadlock, however, it does offer another function capability not available with the 1850 deadlock.

**W**hen coupled with a 4590 Latch Paddle Device (see *Illustration C*) or one of three Latch Handle offerings such as the 4560 (see *Photograph 11*), the 4730 deadlatch becomes an egress device while allowing continuous locking capabilities and ease of egress with the push of a paddle or the downward turn of a handle. The Latch Paddle and Latch Handles are an alternative to a keyed cylinder.

The function of this lock provides flexibility of traffic control during and after business hours. A reverse turn of the key (while the bolt is held retracted) retains the bolt to allow two-way traffic for hospitals, banks, stores and other buildings which require free entrance at times and exit-only at other times.

The latchbolt has a 5/8 inch throw and is made of white bronze



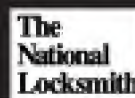
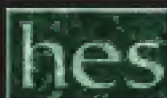
**12. A cam plug is then installed which is needed to actually actuate the lock.**



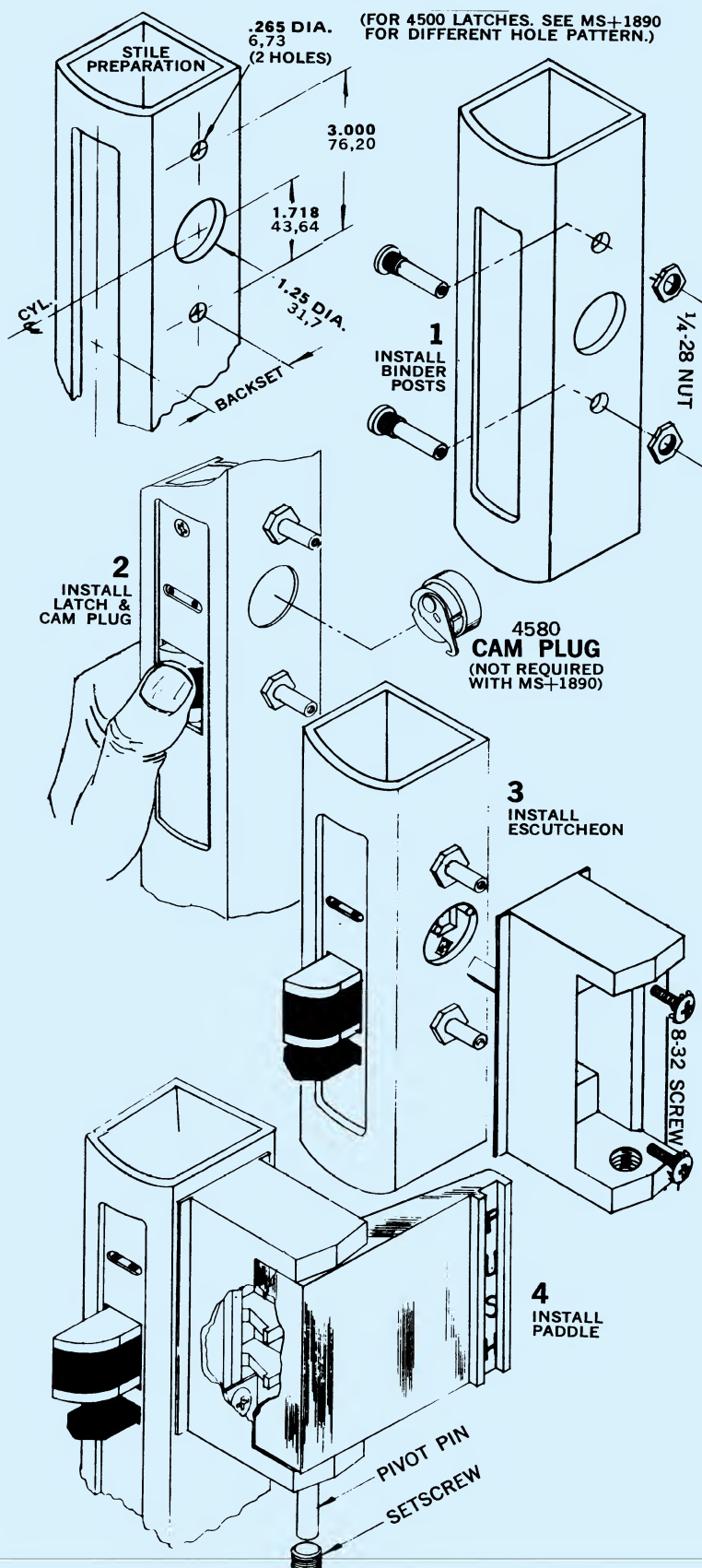
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## 4590 PADDLE DEVICE INSTALLATION



**D. Installation of the paddle handle.**

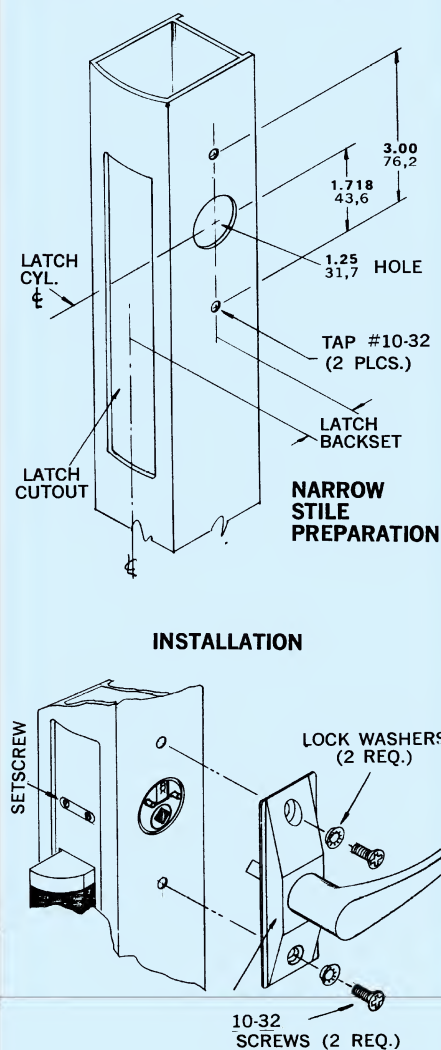
with hardened steel internal pins. Handing is easily reversible without special tools. The auxiliary bolt is under the latch bolt and deadlocks the latch bolt to prevent "loiding" or case-knife entry.

## Installation of the 4590 Paddle and 4560 Lever Handle

First drill the appropriate mounting screw holes for either the Paddle Handle or the Lever handle using the template provided with either device and then install the Adams Rite deadlatch. A cam plug is then installed which is needed to actually actuate the lock (see Photograph 12). Secured in the latch

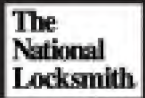
## 4560, 4561 & 4565 LEVER HANDLES

### INSTALLATION



**E. Installation of the Lever handle.**






body by a cylinder setscrew, the cam plug is also rigidly tied to the escutcheon of the paddle or handle by hardened steel pins. The cam plug can be reversed to fit on either side of the lock by removing a spring clip and flopping the cam and replacing the clip.

Install the paddle handle or latch handle with the screws provided (see *Illustrations D & E*). A mortise cylinder is then installed on the outside of the door.

**L**ast but not least, you will have to install the strike plate and the installation is complete. It, too, has a kit to install it in the existing strike hole. Instructions for modification also come with the strike plate.

Adams Rite has long been known for its aluminum store front door locks and remains the primary lock provider for that market. You are sure to service and install a number of these locks over the course of your career. For more information on Adams Rite locks contact them at, Phone: (310) 699-0511, Fax: (310) 699-5094.

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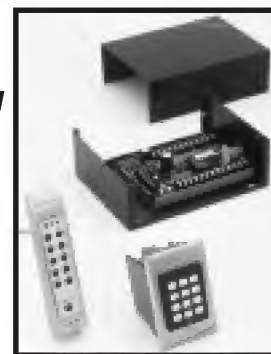
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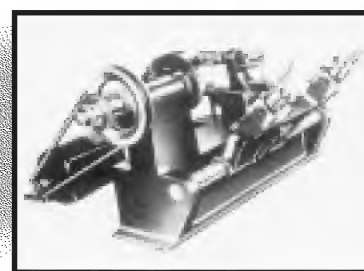
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**EIGHTH PRIZE:**  
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**NINTH PRIZE:**  
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**ELEVENTH PRIZE:**  
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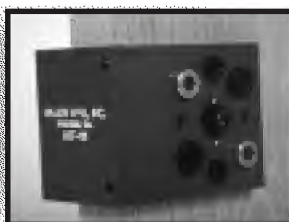
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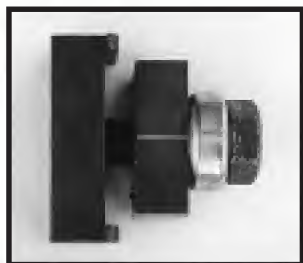
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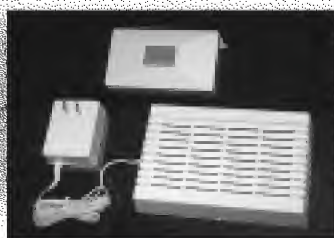
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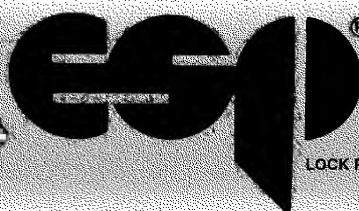
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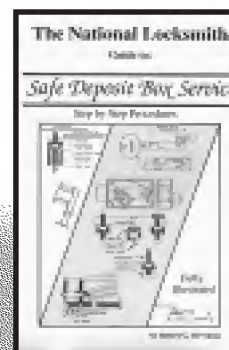
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If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

By entering, your chances are greater than ever that you will win one of the prizes listed. This is the biggest Technitips prize year ever. Wouldn't you like to be a prize-winner in 1997? If so, enter today!

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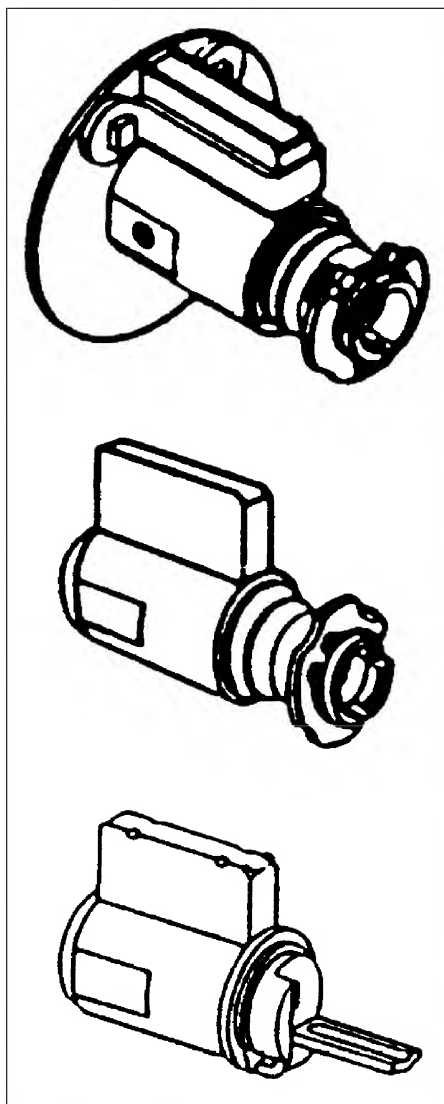






**ALL LOCK KWIKIT  
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Master - Keying**

The Master Universal Pin Rekeying System, includes a series of replacement cylinders to cross-key Master/Dexter knobs, levers and deadbolts, to Kwikset, Schlage and Weiser keyways. The three cylinder types, which are not interchangeable, have brass plugs and diecast shells and are furnished without keys (see *Illustration 1a*).



**Illustration 1A.**

Instead, each cylinder type is fitted with one-piece, serrated pins which are designed to be sheared off to create the bottom pin and driver (see *Illustration 1b*). This is accomplished by inserting the desired cut key and placing the cylinder in a special fixture which applies 1,000 inch pounds of torque to shear the serrated pins.

Personally, I feel this technique is best left to novices at the home

## A Few Words From Jake...

Well, here we are just a short shot away from the end of the year and you still haven't sent me in that great tip you were going to. With less than sixty days to the end of the year, you best get cracking. Especially if you want to latch on to one of the great year-end prizes that I'll be giving away in January.

There are going to be TWENTY-ONE(!) mighty happy locksmiths in January when they see their name in print as winners of one of the year-end prizes for 1997. I hope you're among them. But! If you don't write it down and send it in, I can't review it and print it!

And, don't forget to include your physical address along with your tip. That's especially true for you guys and gals that are sending me tips on the Net. If you don't include a physical address, I can't print the tip. It's just that simple.

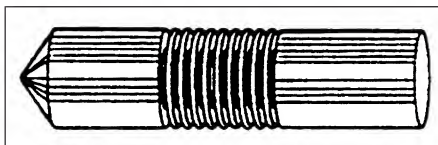
Before I forget: Next year's monthly prize list will be as big and as bad and as interesting (maybe even more so) as it was this year! So, even if your tip doesn't win one of the fantastic year-end prizes, it will, if it's printed, win you some great stuff anyway. So, write it down and send it in.

Speaking of monthly prizes, take note that JET HARDWARE MANUFACTURING, CORP. (800 Hinsdale St., Brooklyn, NY 11207. Phone: 718-257-9600, Fax: 718-257-0973) has joined us as a monthly prize contributor beginning this month. Jet will be supplying some lucky locksmith with 100 Jet key blanks every month! I'd like to say thanks to Al, George and Lorrie for their generosity and support.

In the meantime, get cracking with those tips, have a Happy Thanksgiving, don't forget to include your physical address and I'll see you next month. Y'all heah me now?



**by Jake  
Jakubowski**



**Illustration 1B.**

improvement centers since locksmiths can easily key these cylinders with little or no equipment expenditures. All that is needed is a small flat blade screwdriver and a hollow follower.

Grind the tip of the screwdriver to approximately 9/64" wide and use it to tap the end of the slide (spring retainer) to the point where the end can be grasped with a small pair of flat-nosed pliers and carefully pulled from the bible. With the knob cylinder it is necessary to bend back the tab of the yoke which holds the shell to the face plate, to gain access to both ends of the bible. At this point, the cylinder may be repinned in the conventional manner.

Although the pinning can be done through the tops of the chambers as when rekeying an interchangeable core cylinder, I prefer to remove the

plug to do the repinning. I do this because the plug has a flat which has been machined at the factory and original length pins will often protrude above the shear line. By removing the plug to repin it, you can visually select the proper pinning if there is a difference between the standard pin for the keyway you are using and the pin necessary to effect a shear line in this particular cylinder.

I have also found that the best follower to use is the medium (.495 outer diameter) hollow follower from HPC's set number SUT-14. This follower fits perfectly over the ends of the plugs. Of course, by inserting the follower first, you can insert the top pins and springs before replacing the spring retainer on the top of the plug.

The Kwikset and Weiser cylinders from this series can also be used as a composite keyway and set to any common key which will pass the broaching i.e., Corbin 80 (CO97), Dexter 67 (DE8), Harloc-N (HR), Ilco 1054K (IN3), National D4275 (NA6), Sargent 265U (S3) and Segal K9 (SE1).

Peter P. Schifferli  
New York





**AERO LOCK TRY KEY  
SET WINNER:  
Datsun Ignition  
Repairs**

On older Datsun and Toyota ignition cylinders, the shoulder stops in the keyway wear down and the key is allowed to enter the plug too far and, as a consequence, will not turn the ignition.

There is no doubt that the proper procedure for repairing this problem is to replace the old, worn ignition with a new one. However, if you do not have a new one or the customer can not afford to have the ignition cylinder replaced, here are two quick-fix solutions that can help on a temporary basis. Or, at the customer's discretion permanently.

To correct the problem on a Toyota plug, you can use a bottom pin from a pin tumbler lock. As seen in *Illustration 2a*, you simply drive the pin into the plug from the top of the plug, just behind where the tip of the key would - or should - stop. It sometimes helps to use a hammer to flatten the sides of the pin to

make it fit better into the keyway of the plug as shown.

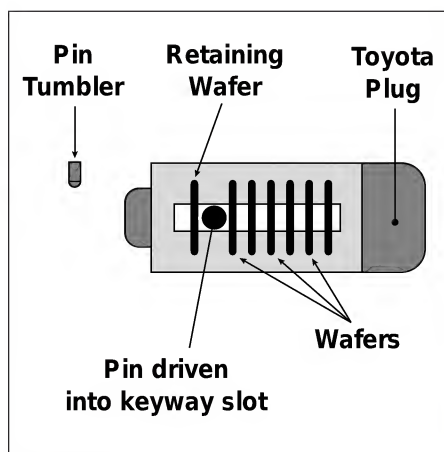
Before inserting the pin in the keyway, always align the key in the plug so all the wafers are at the proper shear line and then mark the plug where the tip of the key should stop. When you insert your pin, and before driving it in solidly, recheck the key to make sure it is bottoming out against the pin and all the wafers are in their respective shear line positions.

On older Datsun, and some Nissan products, use a number 90 top pin and drive it into the back slot

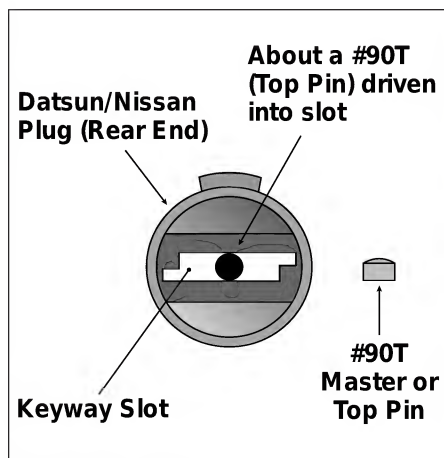
at the end of the plug (see *Illustration 2b*). Again, you want to first insert the key and make sure the wafers are properly aligned. Now, you can drive the pin into the back of the keyway until it butts up against the tip of the key.

In both cases the pins will act as a key-stop since the shoulders are to worn to do so. However, I would like to stress that this should be a considered a temporary measure until the proper replacement ignition can be found and installed.

Cole Frazer  
California



*Illustration 2A.*



*Illustration 2B.*



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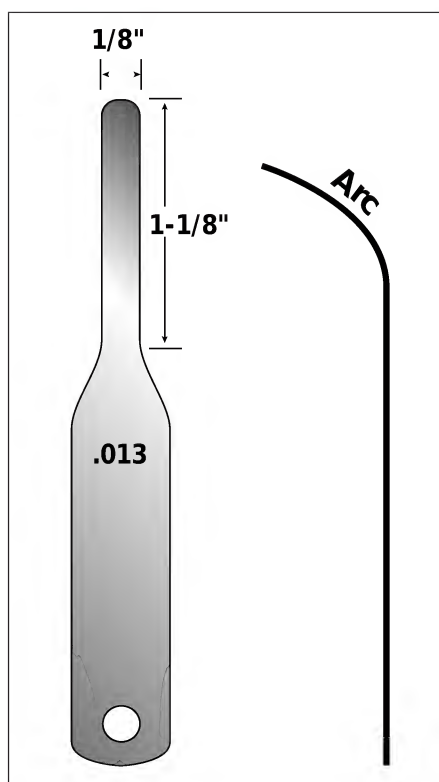
**STRATTEC RACING  
JACKET WINNER:  
Removing GM  
Sidebar Locks**

Here are two tips that I think will help a lot of locksmiths out there. The first one is a simple way of threading stubborn mortise cylinders back into a lock: Just put a drop or two of cutting oil on the cylinder and it will often ease right back into the lock.

My second tip concerns removing the ignition cylinders from '94-'95 GM "N" models (Skylark, Achieva, GRAND AM) with your own homemade pick.

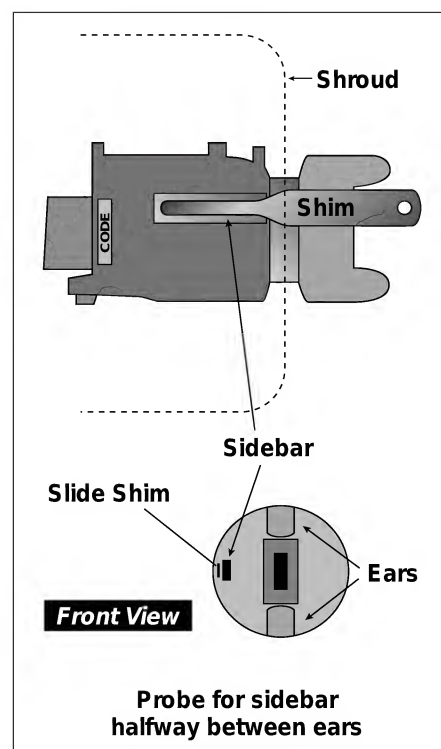
I fashioned this sidebar shim/pressure device from an old .013 feeler gauge. As you can see, I just ground it to the proper shape and then arced it on the working end (see *Illustration 3a*). A .013 feeler gauge is thin enough to fit between the groove in the ignition and the sidebar. Yet, it is resilient enough to keep pressure on the sidebar when you apply it in order to pick the plug. As I did, you may find it necessary to rework the arc on the gauge to get the right pressure.

To use the tool, you should first remove the negative terminal on the battery and then insert the tool



**Illustration 3A.**

between the ears and probe for the sidebar (see *Illustration 3b*). The shim will slide along the sidebar to the end of the groove in the housing.



**Illustration 3B.**

Pressure is applied to the sidebar by the arc in the tool pushing against the outside of the housing.

With pressure applied to the sidebar, rake the wafers in the ignition

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until the sidebar falls into place and turn the ignition slightly toward the "ON" position. Once the plug turns a little, remove the shim and pick and continue turning the cylinder to the "ON" position. Now the retainer can be depressed and the cylinder removed.

Carl J. Bordette  
New York

[Editor's Note: Carl, thanks for your tip. One thing I like about locksmiths is how creative they can be when it comes to developing tools to accomplish a given task. And, with the shroud removed and a little manipulation to depress the retainer with a poke tool, this ignition can be removed pretty much as described. However, when dealing with the new GM modular ignitions, I personally feel that it is best to tackle the job with job specific tools and clear directions. For my money, I recommend A-1 Security Manufacturing's PS2 Ignition Service Kit. Of course, we each have to deal with each job the way we see it under real time conditions and with the materials we have at hand.]



HPC PISTOL PICK  
WINNER:  
**Opening National  
Plunger Locks**

This may be old hat to some locksmiths, but I have found a way to open National, pin tumbler, sliding showcase locks (National Part #C8142 or C8143) which are also known as "Plunger" locks (see Illustration 4a).

Frequently, these locks and some file cabinet locks can be opened by inserting a standard hook or rake pick

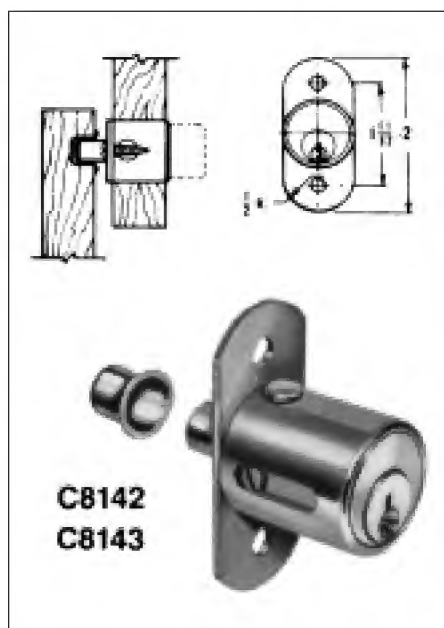


Illustration 4A.

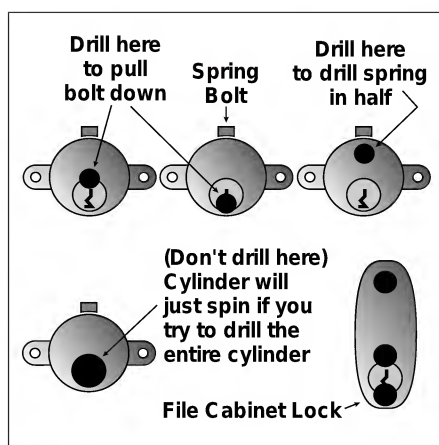


Illustration 4B.

into the keyway while holding inward pressure on the face of the lock, and pulling the springbolt and retainer at the rear of the plug down. Often it may take a few tries but with a little practice on one you may have in stock will help you develop the "feel" necessary to accomplish this.

When you encounter one of these locks (or a file cabinet lock) that can not be manipulated open through the keyway, it becomes necessary to drill the lock open. Illustration 4b, shows several methods of drilling the National locks as well as many file cabinet locks.



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Once you have completed the necessary drilling, you can either turn the plug to release the lock, fish the spring bolt downward or fish the drilled out parts out of the hole and turn the plug with a small screwdriver.

As can be seen in the illustration, drilling toward the top of the cylinder is designed to cut the spring bolt in half. Once you have accomplished that, you can rake the parts out of the hole and fish the remainder of the springbolt down. However, you should not try to drill out the plug with a drill bit the same size as the plug since once you penetrate the full length of

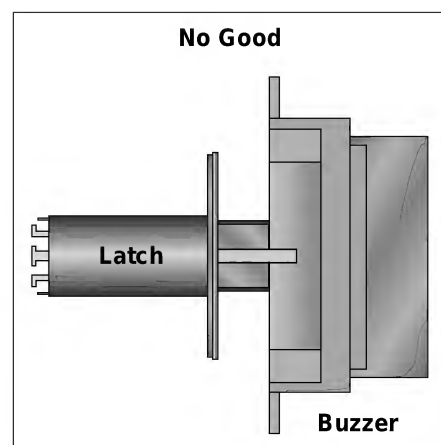
the plug, the remainder of the plug will usually just spin around without releasing the springbolt.

Chuck Frazer  
California



**SARGENT AND  
GREENLEAF WINNER:  
Overcoming Plunger  
Problems**

When installing an entry set and electric strike combination on a wooden door with a wooden frame, I have — after the lock has been in service for awhile — often encountered a problem with the anti-friction plunger on the entry set riding

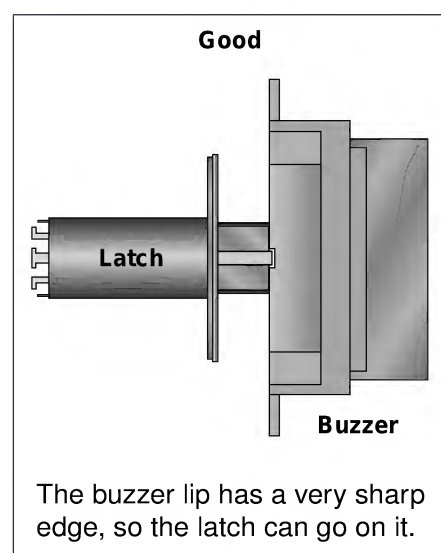


**Illustration 5A.**

up and over the edge of the strike's sharp lip (see *Illustration 5a*). Over a period of time, this will either destroy the latch or cause it to malfunction and create a lockout. I have not (so far, anyway) found where damage has been caused to the strike.

To prevent this from happening, I use a Dremel tool with a cut-off wheel, to cut a small notch in the lip of the strike as shown in *Illustration 5b*. This notch allows the anti-friction plunger to seat and prevents it from riding over the strike's lip. Since doing this, I have no had any further problems.

Joseph Fried  
New York



**Illustration 5B.**

[Editor's Note: Interestingly enough, Joe, almost right after I received your tip and had read it, I was called out to service a problem just like you described. However, the door and frame were misaligned which would not allow the latch to seat properly. Since the customer did not want to pay

**Continued on page 94**

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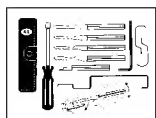
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# Continued from page 92

to have the door and frame properly repaired, I resorted to using your tip to resolve the problem after installing a new latch.

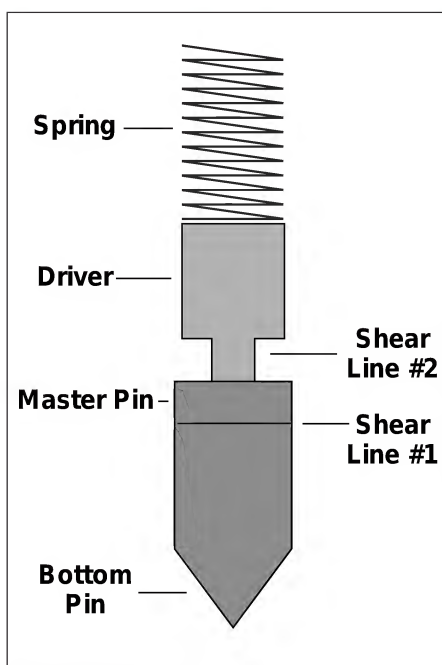
I have not encountered this problem on doors and frames where everything was properly installed, and although I used your idea to "fix" my customer's door, I would recommend that the root cause (door sagging, frame twisting or door/frame misalignment) be addressed before resorting to this sort of "modification". Thanks for the tip, Joe.]



## A-1 SECURITY PRODUCTS WINNER: Segal Lock Bypass Method

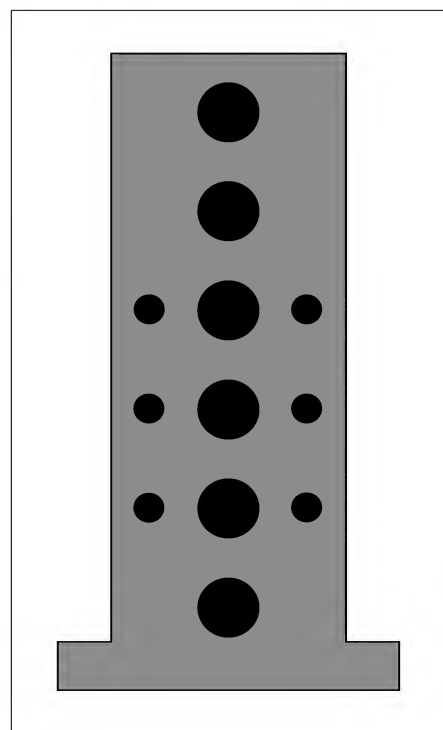
The Segal, Hines Key System, cylinder is a very interesting lock. Many an unwary lock picker has had a smile of joy suddenly turn sour when the lock they so easily picked only turned 15 degrees or so and then froze up. This "relocking" effect is a security feature that is achieved by a unique pin tumbler configuration in the 2nd, 3rd, and 4th chambers.

As you can see in *Illustration 6a*, those chambers employ a conventional bottom and master pin. However, you will notice that the driver has a tip protruding from it and facing downward towards the master pin.



**Illustration 6A.**

With the correct key inserted, the operational shear line will always occur between the bottom and master pins (There are twenty-seven possible combinations with the three master pins). Notice the holes milled into the plug along the side of three of the six chambers (see *Illustration 6b*). When the lock is picked to an incorrect shear line that



**Illustration 6B.**

passes between the master and the driver in at least one chamber, the plug turns about 15 degrees and the tip on the driver seats into the hole and prevents the plug from traveling any farther.



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Since this lock seems, initially, to pick very easily, it is an open invitation to the picker to trip a driver into one of the relocking holes.

If you encounter one of these locks that needs to be opened because of a lost key or whatever, try bypass methods first and use picking as a last resort. If you do try to pick this lock once the plug begins to turn, allow it to turn only about 5 degrees and stop! Next, use your plug spinner set on the very heaviest tension to spin the plug to the unlocked position and open the lock.

Pete Gamble  
North Carolina



**SILCA KEY BLANKS**  
(100) WINNER:  
**Titan Plug Follower**

The conventional way to rekey a Titan cylinder is to use a follower with a shim to allow the plug to be removed without dumping pins in the gap at the back of the plug caused by the follower stopping at the spring actuated locking bar. No matter how carefully you do this, you can easily loose the top pins in the first and second chambers.

I have made a follower that eliminates this problem.



**Photograph 1.**

As you can see in *Photograph 1*, I used a long piece of aluminum tubing with an outside diameter of 1/2". By starting with the smallest drill bit that will fit inside the hollow tube, keep increasing the bit size until you have drill out the inside of the tube to 11/64". By drilling out the tube in increments, you decrease the chance of the bit wobbling and the hole becoming off center. Drill to a depth equal to approximately one-half the length of the tube.

Next push the tube into the shell of a Titan lock until it stops at the locking bar. Use an awl or a felt tipped pen to mark the tubing on either side of the locking bar. Use a small square to transfer these marks down the follower approximately 1-5/8". Use a Dremel Tool, or a hacksaw to cut along these two lines and remove the piece.

Before using the tool, dress all the sharp edges with a file using a round rasp or Emery Cloth wrapped around a wooden dowel. Thin out the remainder to the tip of the follower to approximately .015" so that it will fit over most of the tapered end of the plug.

Now line up the slot in the follower with the locking bar and use as you normally would. To replace the plug in the shell, turn the follower one quarter turn in the clockwise position or until the cutout is facing down. If you turn the follower counter-clockwise you will dump all the top pins and springs.

James P. Holzer, CRL  
Wisconsin



**PRO LOCK PK 15**  
**PROFESSIONAL PICK**  
**SET WINNER:**  
**Rekeying Panic Exit**  
**Devices**

Late one night the owner of a dry cleaning establishment called me because she had lost all of the keys to her building. There were seven doors; six of which were doors with exit devices on them. The front door had a standard Adams Rite M S lock.

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The owner wanted a quick fix for the night and I did not relish the idea of spending most of the night disassembling and rekeying panic exit devices. I rekeyed the front door lock and then placed a broken key blank into all the cylinders on the panic exit hardware. This would prevent anyone from inserting a key into the lock and operating it, the owner locked the front door and we both went home to bed. I returned the next morning to remove the blank and rekey the panic devices.

R. J. Bent  
New York



**TECH TRAIN TRAINING  
VIDEO WINNER:  
Fixing Toyota Locks**

I had a customer whose driver side door lock on his 1983 Toyota Supra, was broken and he wanted it replaced that day. I don't carry these locks in stock and looked for a way to fix the lock that was already in the car. The cylinder in these locks are secured to the handle with a bolt that threads into a plastic nut that is molded into the door handle.

In this case, the nut was broken and would not allow the cylinder to stay in place in the handle. I was faced with the problem of how to secure the lock and prevent it from falling out of the door altogether.

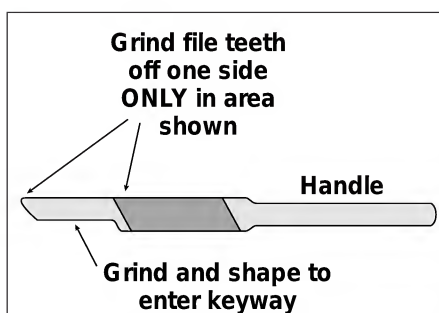
The handle is attached to the door with two bolts, which gives the handle ample strength. First, I enlarged the keying hole in a Master M1 blank and then removed the bolt securing the handle that was closest to the lock. I slid the modified Master blank over the bolt and then reinstalled the bolt in the handle. Then I bent the blade of the blank up and over the back of the lock cylinder to hold it in place.

Marc Grizzard  
South Carolina



**SIEVEKING PRODUCTS  
GM E-Z WHEEL  
PULLER WINNER:  
Universal  
Cleaner Tool**

Here's a little tool that I made from an automotive ignition point file and have used for years to do all manners of crud cleaning of keyways and wafers in wafer style locks (see *Illustration 7*). It's also handy for straightening up wafers that may have been bent or twisted in the keyway and you need to align them so you can get a key to pass the obstruction and operate the lock for removal or repair.



**Illustration 7.**

I've used it to clean out the keyways on utility box locks that refuse to function and to straighten GM wafers when you accidentally bend one trying to get it out of the cylinder.

Ignition point files can be obtained at nearly any auto parts store. By using a Dremel Tool or similar grinder, shape the file as shown in the illustration, but only grind the teeth of the file off on one side.

Michael Swanson  
Illinois



**MAJOR  
MANUFACTURING  
PRODUCTS WINNER:  
Spare Key Storage**

With more and more plastic being used in automobiles today, it is getting harder and harder to find someplace on the vehicles to use a magnetic box or store a spare key. I have a solution to the problem and used it on my own car and the spare key stayed in place during the flood of '93.

Locate your spare key hiding place on the car (I use the back of my license plate) and glue a strip of Velcro to the area with a good, strong, waterproof epoxy-type glue.

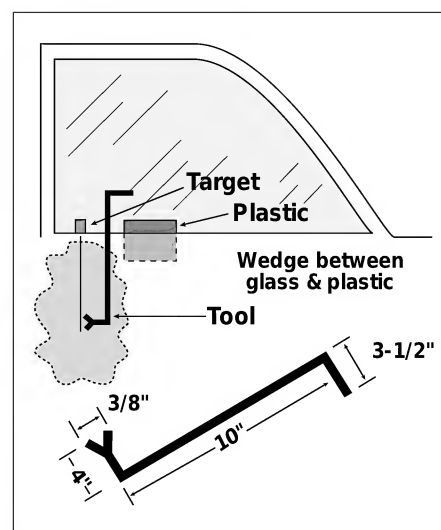
Next, glue two pieces of Velcro (one on each side) to the head of the key. When the glue has dried, trim off the excess Velcro. Now place the key against the Velcro that was glued in a hidden area and the key is there to stay until you, or your customer needs it.

J. Paul Gannon  
Missouri



**SLIDE LOCK'S "Z" TOOL  
OPENING  
SET WINNER:  
Vertical Button  
Opener**

*Illustration 8*, shows a tool that I made to open Ford's and other vehicles that have vertical rod buttons. I also utilize a piece of plastic cut from an old milk carton in conjunction with my wedge to keep from scratching a window.



**Illustration 8.**

Use 3/16" inch rod and bend it into the shape and dimensions shown in the *illustration*. Flatten the business end of the tool as shown. By making the "fork" in the tip of the tool, I'm able to easily grab and lift the most stubborn vertical rods.

Jim Couch  
Texas



**THE SIEVEKING AUTO  
KEY GUIDE WINNER:  
Chrysler 8-cut Key  
Information**

Here's some useful information on the new Chrysler 8-cut keys in code series M 001-M 2618:

Spacings and depths are the same as for the 7-cut keys in the code series L0001-L3580 except for the additional spacing that has to be added between the bow and the first cut on the 7-cut key. Both series use the Y157 blank.

The 1200 CM code card for the 7-cut is the CX-60. By adding a spacing mark in the proper position, for the additional cut, the CX-60 can be used to originate the 8-cut keys.

Spacings for the 8-cut keys, measured from the tip are:

1 = .942, 2 = .849, 3 = .757, 4 = .665, 5 = .573, 6 = .481, 7 = .389, 8 = .297, with the spacing from cut-to-cut being .0921.

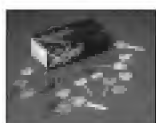
Depths are:

1 = .340, 2 = .315, 3 = .290, 4 = .265, with the depth increment being .0252.

If you use a Curtis Clipper, the Chry-4 cam and the Chry-4B carriage will do the job. The HPC Codemax uses DSD, number 258.

Thomas D. Cole, CRL  
New Mexico





**JET KEY BLANKS (100)  
WINNER:  
Kwikset Cylinder  
Removal Tool**

The best tool I ever made to knock out the cylinders from Kwikset locksets was a set of 6 inch HPC pinning tweezers. Bend the ends out just enough to allow the tweezers to pass through the opening at the base of the knob when the tweezers are closed. Then open the tweezers and let them rest on the top ends of the retainer clips, tap lightly with a screwdriver handle and the cylinder usually pops out on the first whack. Paul Maziarz  
Rhode Island



**JAKE'S GRAB BAG  
PRIZE WINNERS:  
Insurance VIN Card**

Recently a customer who had lost her car keys found she couldn't read the VIN number of her car to call for Roadside Assistance because the number was obscured by a piece of paper.

In Ohio and many other states that have mandatory auto insurance laws and drivers are required to carry insurance identification cards in their purse or wallet. These cards have the VIN number of the vehicle on them.

This card can also be a way for the locksmith to verify ownership of a vehicle as it is often easier to locate than a title or registration. Robert Milan  
Ohio

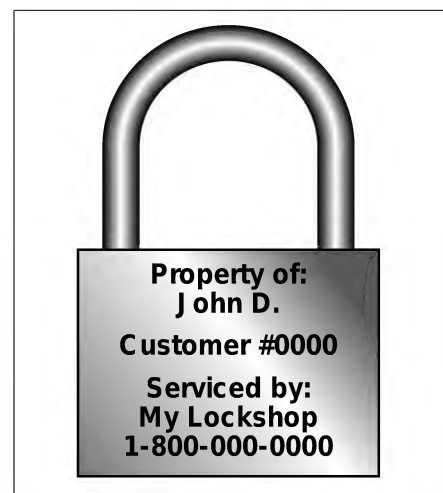
**Repairing Screw Holes**

When I find strike plates or screw holes that have become enlarged, I fill the holes with one or more Interdental Stimulators. Break them off flush with the hole and replace the screws. Interdental Stimulators are available from most drug stores and are used for removing tooth plaque and preventing tooth decay. They are thin wood strips and come flavored or unflavored. John McCollough  
New Hampshire

*[Editor's Note: Mac, where I come from, then there Interdental Stimulators were called: "toothpicks!" However, I have not seen the flat style in quite awhile. Thanks for the tip.]*

**Promotional Padlocks**

I'm always looking for new or better ways to keep the customers that I have and to gain new ones whenever I can. Like many others, my efforts have included stickers and labels, etc. Recently, I came up with a new twist to placing labels on doors and so forth.



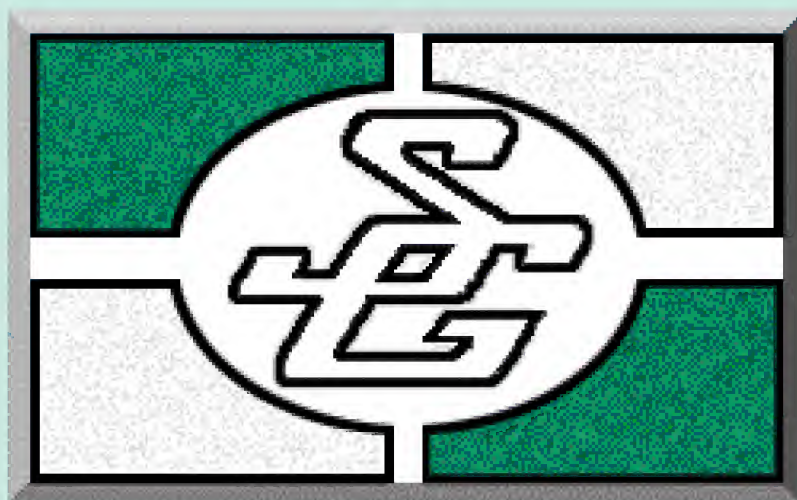
**Illustration 9.**

My shop sells large numbers of padlocks to the various businesses and industries in our service area. Since you can't apply a sticker to a padlock that will last any length of time, I had mine engraved (see Illustration 9). And... I passed the cost on to the customer.

We do our own engraving now with the customer's name, I.D. number and my shop name and number.

M.T. Fingerhant  
E-mail

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# The **WIDER** Side

"Open Wide"



by  
**Sara  
Probasco**

**D**on was preparing for departure to the Safe Tech convention early the next morning, when the call came in. A business in a town about forty-five miles away had a safe they couldn't get into.

"It worked just fine, yesterday," they said.

"Has it given you any problems getting it open recently?" Don asked. "Has the dial seemed difficult to turn, or have you had to run it a couple times to get it to open?"

Well, it has been a bit sluggish for two or three months, now," the man admitted.

"I cannot understand why people will wait until everything jams completely down on a safe before they call a locksmith," Don grumbled to me as he gathered his tools and prepared to go to their aid.

Naturally, time was short for Don that day. In departing early the following morning for the convention, he would be leaving the service end of the business in the hands of less experienced employees who had limited knowledge in opening and repairing malfunctioning safes. This was not a job Don could expect his men to rectify in his absence. Whatever the problem, it was up to

Don to solve it then.

"I'll be back when I can," he said with a sigh as he glanced at the clock and hurried out to his service van.

On the job site, Don ran the combination, but the safe wouldn't open. He patiently tried it again. No luck. Then he began the process of "dialing diagnostics" — going through the combination and dialing each number, in turn, one digit higher or lower than the known combination, in an attempt to get it to open.

No luck.

Even repeatedly oscillating the dial and gently tamping it with a rubber mallet at the drop-in point did no good. Don's growing impatience didn't help matters. He kept thinking about what-all he should be doing back at the shop and at home to get ready for his trip. Finally, he decided to take a little break, get a cold soda, and give it a moment's rest before trying again.

A store clerk approached him with a key in hand.

"A customer, out front, asked me to see if you could make him a copy of this key, when you get time," she said.

Taking the key from her, Don immediately recognized it as an ASSA (high security) key. On it was

stamped the name of a friend's shop: "Ron's Lock & Safe, Pleasanton, Texas." As ASSA subscribers, ourselves, Don knew each participating locksmith is assigned a unique key blank configuration for his or her own customers. No locksmith can duplicate as ASSA key made by another locksmith. The only way a customer can have a key duplicated is by returning to the locksmith from whom

the system was purchased and providing a signature on file that authorizes key duplication.

Once in a while, we have unauthorized persons trying to have copies made of ASSA keys. We always get whatever information we can about the person trying to breach the system, and we notify the legitimate key-holder of the situation. Don thought he'd do the same for our friend, Ron Scott.

"Where is the person who wants this duplicated?" he asked the clerk.

"Back there, getting a soda," the clerk replied. She pointed toward the back of the store.

"Hi, Don," a voice called out as Don approached. Then the man chuckled. "I saw your truck out front and thought I'd rattle your chain."

"Ron Scott!" Don said. "What are you doing up here in Hondo? Don't you have enough to do in Pleasanton?"

Ron said he'd been called there to work on some locks for a chain of businesses he serviced from time to time.

"So, what are you up to?" he asked.

Don told him about the safe, showed him where it was, gave him the combination, invited him to have a go at it, and excused himself to use the rest room. When Don returned, Ron was leaning against the open safe.

"Son of a gun!" Don muttered. "What did you do?"

"Oh, I just got lucky," Ron replied. He had run the combination once, oscillating the dial at the drop-in point. "It came right open," he said.

"With luck like that, who needs skill!" Don said. Then he grinned. "I guess I own you one."

A few months later, I was visiting with another locksmith friend of mine Mike Clark, from San Antonio, at the ALOA convention when Mike said, "Talking about openings that are hard to explain, I had an unusual situation





with a safe, recently. I got a call to get into a big Mosler. The thing was, the inner door locked with a key, and the owners of the safe didn't have a key to the lock. I got it open, all right," Mike said, "but how it got locked in the first place was a real mystery."

**M**ike went on to tell me that somebody had mentioned a five-year-old kid in the family had been fooling around with the lock, one day. He had a paper clip, or a hair pin, or such, poking it in the lock and twisting it this way and that, pretending to manipulate the lock. The next thing they knew, the door was locked tight.

"You're kidding," I said, incredulous. "Would it be possible for a child to actually lock a Mosler safe with a paper clip?"

"Beats me," Mike replied, "but nobody ever came up with any better idea of how the door got locked. The customer had owned the safe for about thirty years, and never had a key to the inner door. It had never been locked before the kid fooled with it."

"What am I doing wrong?" Don asked when I told him. "Here, I spend an hour working on a safe, and Ron gets in it with a flick of the wrist. And now you tell me five-year-olds are cracking safes with paper clips. There's no justice in the world," he moaned.

"Now, Don, we all have our good days and our bad days," I reminded him. "Besides, you've told me a jillion times, there just isn't enough safe work around our small town to keep a person sharp in unusual situations."

"I know, but..."

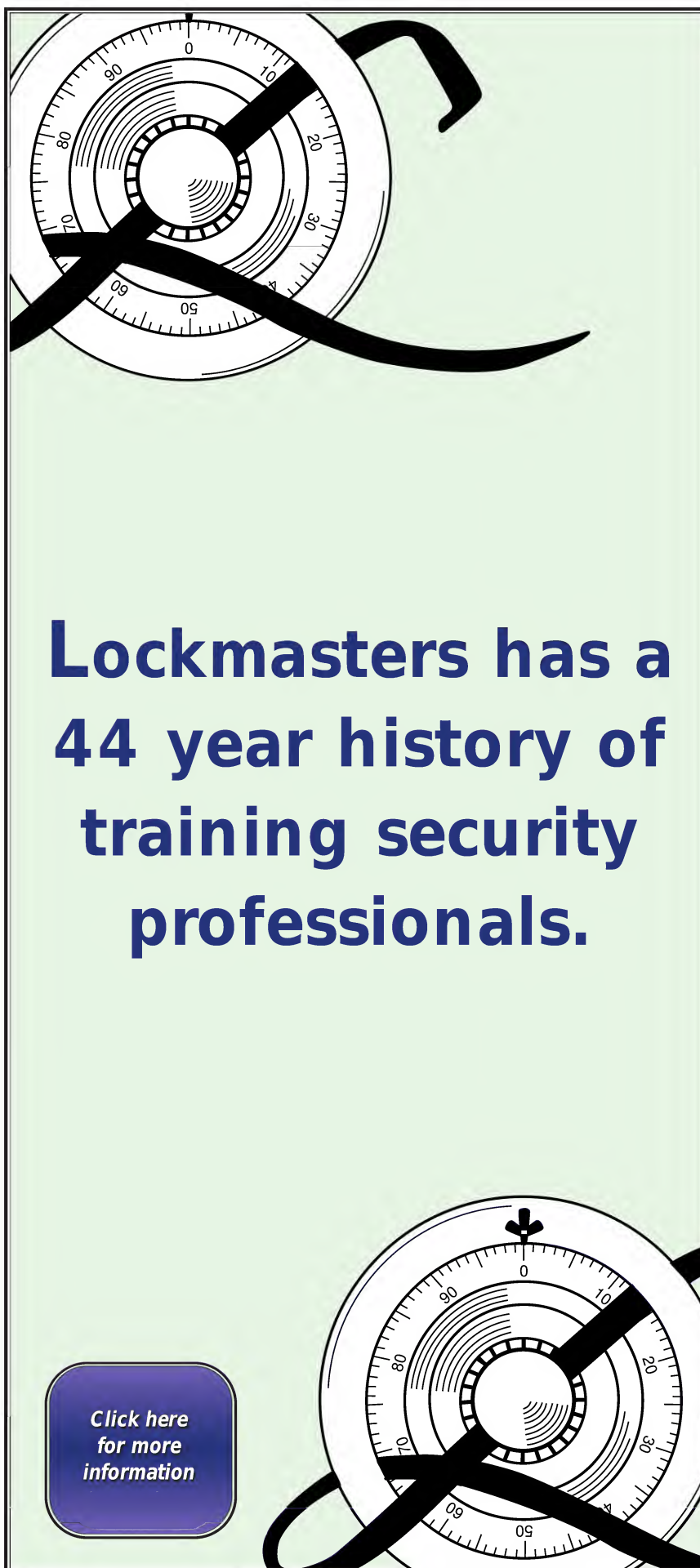
"So, get back to work before I tell my readers how you misplaced your photo-ID and almost missed your flight to the Safe Tech convention."

"You wouldn't!" Don said.

"Well, it's not every locksmith I know who's been detained at the airport as a potential hijacker. You're just lucky the boys at the shop were able to come up with identification they could FAX to the San Antonio airport in time for your flight."

"Well, you know what they say: 'A picture is worth a thousand words.'"

"Yeah, well, I wish I had a picture of your face when you discovered you'd also left your luggage keys behind, and you had to pick open your own suitcase for airport security. **TRL**



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**NO  
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BARRED:**

# The LARGE Deadbolt

by Joe Bucha, CML and Dee Bucha, CPL

Well, it finally happened. Yesterday's mail yielded an envelope addressed to the attention of Dee Bucha, proper PO Box and then Deeville (instead of Beeville), Texas. Cool! I always wanted a town named after me! Even if it is a typographical error, it was great for a laugh.

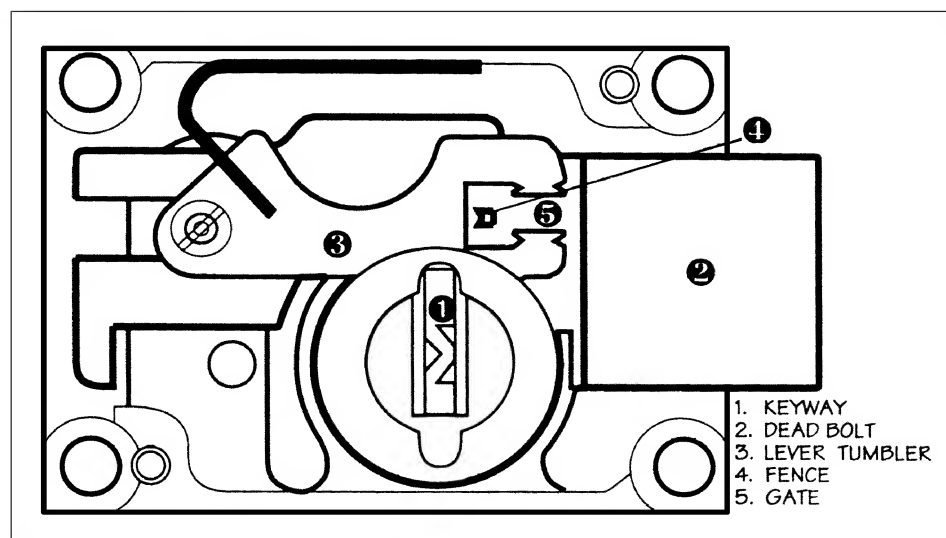
Speaking of communication, need to advise you of an Internet E-mail change. We can now be reached at [jailock@bcni.net](mailto:jailock@bcni.net). Seems our local provider was burglarized. Loads of equipment was stolen, wires were cut and offices were totally trashed. Goes to show you, no place is exempt...and don't we know it! Jot down that change, but if all else fails the other easy E-mail address is [jailock@USA.net](mailto:jailock@USA.net) (no dot after that string). It's more generic and very widely used.

Last time we talked about the small deadbolt. When we get inside the Folger Adam #10 (and equivalent) locks, their operation is very simple and straightforward. Technically speaking, we are looking at nothing more or less than half a safe deposit box. The operating principle could not be more basic: insert the correct key and line up the tumblers. As the key turns, the fence moves into, then through the gate, and the lock is open, i.e., the bolt is

retracted. (The key is not self-retaining, as safe deposit box keys are.) Reverse the procedure and you extend the bolt.

Take a few moments to study the conformation of the lever in *Illustration A*. In the detention field there are several types of levers, and we will meet them all in future articles. This is the most basic of levers and is called an open-close lever due to its simplicity. The fence is either in or out, the lock is either open or closed, locked or unlocked.

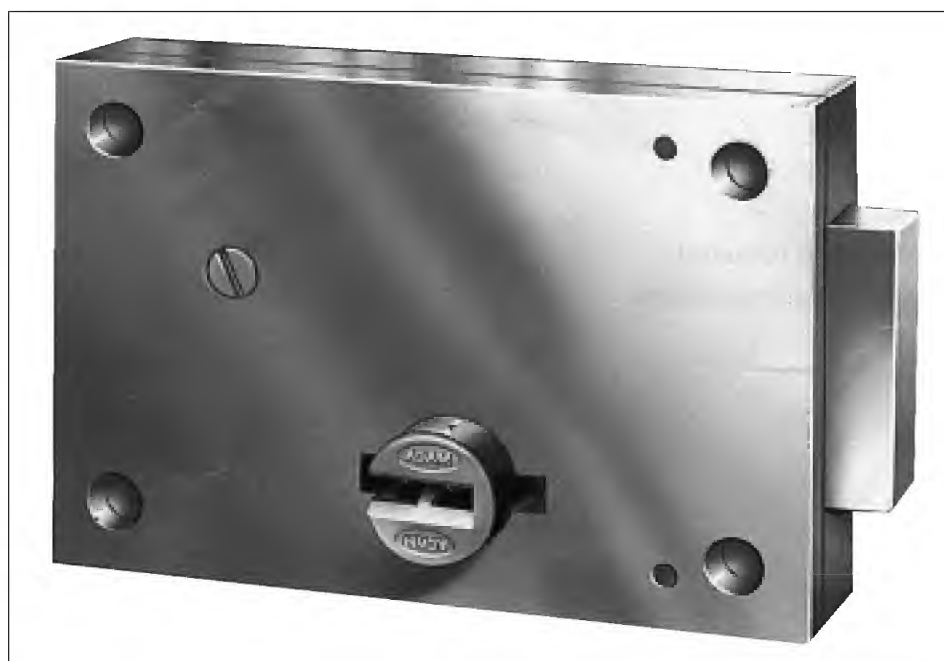
Since we covered the small deadbolt, let's kick this month off and talk about the LARGE deadbolt in jails and prisons. We're going to simply chart measurements as we cover various "equivalents" from here on out. It's more efficient. A chart, like a picture, allows us to scan black and white information into our gray matter much quicker than detailed reading. This month we're examining the "other" jail and prison deadbolt: the BIG deadbolt. Happily these deadbolts are fully interchangeable out in the real world.



**A. This illustration is typical of the Folger Adam #10 deadbolt and its equivalents.**



Manufacturer	Height	Width	Length	Bolt Throw
Adtec 4080	3-3/4"	1-1/2"	5-1/2"	3/4"
Folger Adam #80		-ALL MEASUREMENTS SAME-		
Southern Steel 1080		-ALL MEASUREMENTS SAME-		



**1. The Folger Adam #80 utilizes a bolt which is 2" in length and 3/4" thick with a 3/4" throw.**

The Folger Adam #80 (see Photograph 1) utilizes a bolt which is 2" in length and 3/4" thick with a 3/4" throw. There are several things you have to know when ordering these locks. Handing, of course, is a variable; the type of installation you plan to use, hinge or stop-side mounting; whether you will require key access from one side or both sides of the door and the type of mount you will require.

The mount is determined by what the door is made of and its design. For example, is it a wooden, solid metal plate, grated, or hollow-metal door? Keying needs will also have to be determined. Do you want a new (random) combination or do you want the lock to be keyed to an existing combination? For those of you who aren't familiar with jail and prison locks, master-keying is not done on these lever (paracentric) locks. You won't find knobs on these and they weigh about 7 pounds.

There is absolutely nothing fancy about these locks. You could quite literally state they are larger, heavier-duty versions of the Folger Adam #10 lock. As you begin to move around from facility to facility, you will find this lock is the most widely used

mechanical lock when a swinging door is involved. It's very common for cell doors, control rooms, key cabinets, and storage rooms. They are rated as maximum security.

Remember on these strikingly similar, equal-sized locks, the same identification methods hold as true for the Folger Adam #80, as for the Folger Adam #10. Southern Steel and Folger Adam use locating pins which are placed next to both front mounting holes at the bolt end of the lock (see Photograph 2). R.R. Brink and Adtec use the diagonal configuration for these locating pins. And remember, too, the embossed letter or name on the keyway.

All manufacturers currently use anti-pick notches on the tumblers and 5-lever locks are considered "standard" except for R.R. Brink. While Adtec, Folger and Southern list 6-lever locks as an option, R.R. Brink uses 6-lever 80 series locks as a standard and offers the 5-lever as an option.

Folger Adam and Adtec add a 6 suffix to its 6-pin versions. Southern Steel uses a T6 suffix for their six lever version, and if you want a Brink 5-lever, just specify.

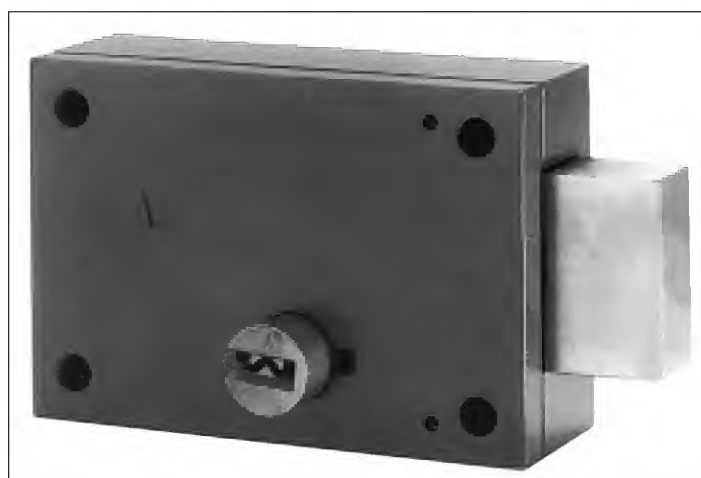
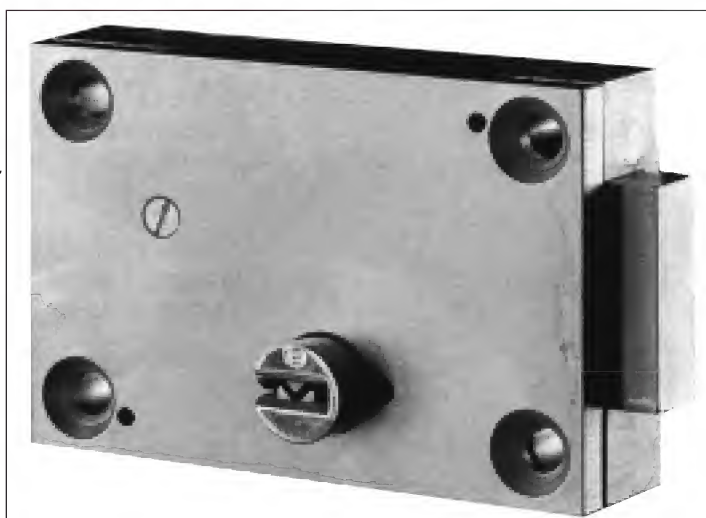


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**2. Southern Steel and Folger Adam use locating pins which are placed next to both front mounting holes at the bolt end of the lock. And remember, too, the embossed letter or name on the keyway.**



**3. To identify an equivalent, Southern Steel will add a 10 to the front of a number, while Adtec uses a 40 prefix such as 4080.**

**B**olt lengths depend on how you're going to mount this lock. If you're going to use a hinge side mount, the norm is a bolt which projects out from the body of the lock by 3/4", but if you're using a stop-side mount, you want a longer 1-1/4" projection. Longer bolts can be special ordered, of course. And speaking of mounting this lock, you will usually find these locks mortised into the door. Surface-mount and jamb-mounting can also be utilized.

Now I'll give Joe a shot at some information for all of you.

Very little can go wrong with the #80 lock, excluding the older versions which have a small design flaw. Note that it wasn't a flaw 50 years ago, and with new designs, we can be absolutely certain they've been improved.

All the #80's have three steel rods inside the bolt as added resistance, in this case to prevent sawing of the bolt. On the older versions, those steel rods were pinged in place and occasionally (after heavy use) could work loose,

feeding back through the back of the bolt, fall into the lock body and jam the lock. This was easily corrected by fully closing the rod placement holes via welding, and that is no longer a common problem. Be aware, however, that there are still some old ones out there. I know several facilities with locks which easily date back 50 and 60 years. Those locks are still working!

Before closing for this article, let me "explain" how the manufacturer's number their locks. In many cases, excluding those "always-an-exceptions," if you learn these basic rules you can generally second-guess other manufacturer's equivalents, by knowing one or the others number of a given lock.

**A**s we've stated frequently, there are, at present, four major manufacturer's for jail and prison locks, and they're a close-knit group. If Adtec invents a lock, the other manufacturers are going to come up with an equivalent with a great deal of speed, particularly if that new lock is a hot sell item.

A little background, first. Early on, these locks were handmade by local blacksmiths. Later, when jail and prison locks were first manufactured there were several individual companies. Yale, (of course), Stewart and several other Iron Works manufacturers made

these locks on a sort of catch as catch-can basis. Then two companies surfaced as leaders. These were Folger Adam and Southern Steel. Only recently has the number swelled to four, when first R.R. Brink, then Adtec, began hatching new ideas and creating designs. Be assured, however, that all four of the "big four" produce new approaches as new demands are made.

**W**hen studying mechanical locks and the numbering systems, Folger Adam usually is very direct with their numbers. A number 10 lock is the smallest lever lock, and usually as the numbers increase, so to do the size of the locks. To identify an equivalent, Southern Steel will add a 10 to the front of a number, while Adtec uses a 40 prefix (see Photograph 3). R.R. Brink is sort of the odd-man out, not for the purpose of causing difficulty, but because their lock designs were, in the beginning, confined to electromechanical locks. In time, they produced mechanical equivalents and these are a little less rigidly identified. You will see 1000 series, 7000 series and 9000 series locks. It will help to remember a 9000 series lock is equipped with commercial cylinders and keys.

When we cross the line to pin tumbler locks, Folger Adam uses a 110; Southern Steel will again add a prefix of 10; Adtec, uses a 21 prefix and Brink sometimes uses a 10 prefix, but also may change the last two digits. Once more, Brink uses a little less "standard" numbering system. One day, we will simply publish that equivalency list, so you can refer to it easily. While there is one in our book, there are several new additions that are not included.

The #80 lever tumbler lock, and its equivalents are easily interchanged. In Identification, remember that locating pins on Adtec and R.R. Brink have a diagonal placement, while Folger Adam and Southern Steel use a bolt-ended vertical alignment. Note the Folger Adam lock has an embossed "Adam" on the keyway, while the Adtec version shows the letter "B."

Hope you people are out there looking for this work. I know a lot of city and county facilities that simply can't get service. They need the service and certainly can't usually cough up the dough for factory maintenance. This is a high profit industry! Think about it! **TNL**



# Road Rally

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**Owner:** Calvin Boyer,  
Browns, IL

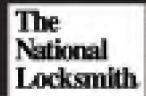
**Model:** 1985 Ford  
1 ton ambulance



**Owner:** Ken Smith,  
Monticello, GA  
**Model:** 1995 Ford E-350







# MOSLER WITH COFFEE



BY  
JOE  
BERGEN

When a customer almost backed his pickup through the front door of my shop, my first thought was "Now what?" I grabbed my coffee cup and strolled out to assess the situation. The driver hopped into the back of the truck and withdrew the tarp off the lump in the truck bed and asked "Can you open that?" he asked.

I stood there for a moment looking at the smallest Mosler safe that I had ever seen (see *Photograph 1*). It sure looked like a safe, but it was the size of an end table. Closer inspection showed that someone had been using it for exactly that, because there were ring marks on the top from coffee cups.

A twist of the handle while turning the dial showed that it had a direct drive lock (see *Photograph 2*). I looked at him with confidence and said, "sure, no problem." However, when we started discussing costs he was somewhat put off by the price for opening. He hadn't thought it would be nearly so much.

As politely as I could I informed him that without a combination he had just acquired a rather unique end table. What I did not tell him was that my curiosity was going wild. I was drooling at the opportunity to see how this cute little thing worked.

After some haggling we reached a compromise. For a price break he would leave the safe at my place to be worked on between jobs.

It was a sunny Sunday afternoon about a week later, when I finally sat down with the safe for some serious attention. The first order of business was to find out the number of wheels I was up against. I tripped around clockwise, counting the wheel pickup as I went. Then I did the same counter-clockwise to double check. There was no question that the lock had a driver and three wheels.

Next I needed to find the drop in on the driver. While using high twisting pressure on the handle, I walked the dial around. First in one direction and



1.

*I stood there looking at the smallest Mosler safe that I had ever seen.*





**A close-up of the Mosler dial and T-handle.**

then the other. By doing this I discovered that the driver had nine "anti-manipulation" false gates plus the true gate. The true gate indicated rather dramatically and would be really hard to miss.

Satisfied that I had a viable working lock, I attached a long pointer to the handle. It was the longest pointer I had that would not completely clear the top of the safe. Under the pointer tip I placed a magnetic home-made scale. It is a gradient made from a child's protractor (the hash-marked plastic arc that kids use to draw with) and the base from a magnetized refrigerator sign.

**W**ith everything in place I was ready to work. The technique is to turn the wheel pack around two-and-a-half numbers at a time and then return to the drop-in. Apply light pressure to the handle and watch where the pointer tip registers. When a wheel gate is under the fence the pointer should register a different reading. That is because the handle tips over just a little more than usual toward opening. The longer the pointer the more pronounced will be the readings.

The gates showed up very well which made it a real treat to work on this safe. The second wheel revealed its gate first, followed a little later by the third wheel. After that it would have been just a matter of "dialing for dollars."

Since the second and third wheel numbers were 60 and 40, respectively, I could pretty well guess the first number. In short order the handle turned with a distinct "clunk" as the fence bottomed out into the wheels. The safe was unlocked.

The door swung open to a beautiful piece of craftsmanship (see *Photograph 3*). The door opened and closed with no



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3.

**The door swung open to a beautiful piece of craftsmanship.**



4.

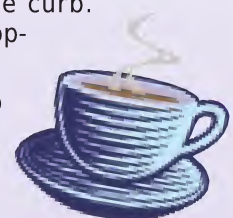
**The two door locking bolts secured the opening edge and hinge side of the door.**

squeaking and no binding. The lock and boltworks moved as smoothly as the day it came off the line (see *Photograph 4*). The safe was very clean aside from the coffee stains on the top and in very good operating condition. It was a beautiful piece of craftsmanship.

Having achieved a satisfactory opening, I decided it was time for another cup of coffee before beginning the next phase — that of gathering reference information for my library. The unique thing about this safe was its size. It was only about twenty-five inches tall, sixteen inches wide and fifteen deep. The reason it could be so small is there was no fire insulation in the walls at all. The walls were only 1/4" thick cast iron. The door, which measured sixteen by twelve, was only 7/8" thick cast iron without any hardplate.

The lock itself looked like a Mosler #0, a lock made by Yale for Mosler (see *Photograph 5*). Notice that the lock is very similar to the Yale "HE" safe lock. It had three 1-7/8" diameter brass wheels and a driver. The wheels were of the mesh hand-change variety (see *Photograph 6*). The driver was located in front while the wheels were mounted on the curb. As the pictures show, the absolute drop-in was at 52 (see *Photograph 7*).

The lock on this safe had no relocker. However, if you'll note the cutout at the four o'clock position on the lock case, you will see that it has



**Continued on page 116**





*Continued from page 114*

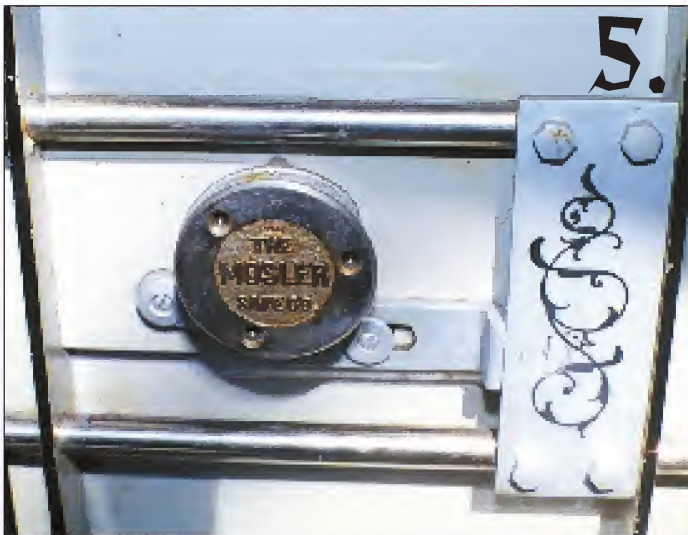
the capacity for a r e l o c k e r , probably similar to that of a Yale "HE" lock or the Diebold "K" lock.

**T**here are a number of drill-and-scope methods to open this safe. I guess that the most direct through-the-door approach is to drill at 1-3/8" from dial center at 54.

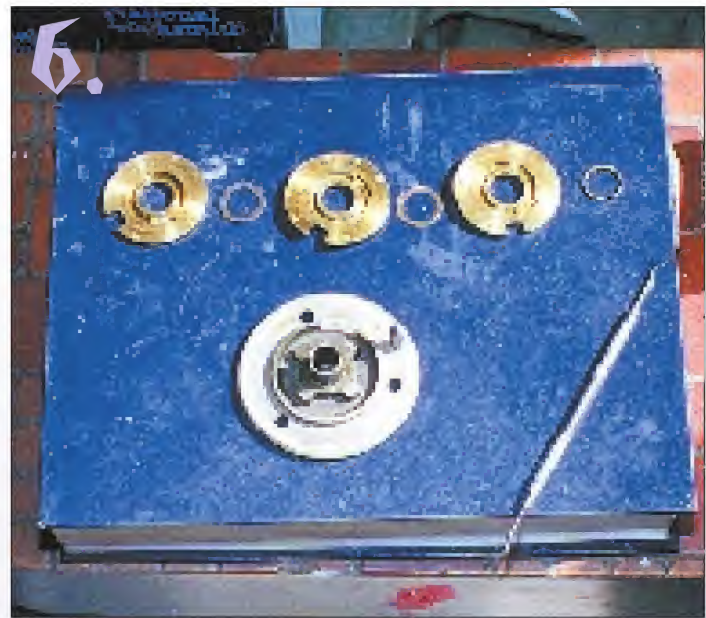
That should put you going right through the bottom of the dial ring. However, you will be catching part of the lever and/or bolt as you break through to the inside. You will have to be careful not to snap a drill bit on that. Scope upward through the crack between the fence and the lock case to align the wheel gates under the fence.

If you have a problem with that location you could drill in at 54 from just outside the dial ring and angle upward just so slightly and achieve essentially the same scope hole.

Another way to open this safe is to drill in from the hinge side at 1-5/8" back from the face of the door



*The lock itself looked like a Mosler #0, a lock made by Yale for Mosler.*



*The wheels were of the mesh hand-change variety.*

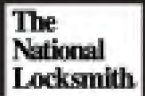
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**The absolute drop-in was at 52.**

and scope the same opening in the lock case. An even slicker way is to turn the safe upside down and drill in through the bottom, at a 1-3/4" back from the door face, and straight scope through the same opening. You should just miss the bottom bolt. You may be only able to scope two wheels, but two out of three is not bad. You can then use a simple progression to find the last wheel.

There are a couple of "last resort" techniques available. If you don't mind destroying lock parts, you can drill off the fence itself. Use an 3/8" drill bit right at the drip-in. You are looking to destroy the lock anyhow, so you might as well go with a more substantial size drill bit. The placement of that hole would be at 1-1/4" out at 52. A better alternative is to drill off the lever screw. Put a hole at 1-1/2" right of dial center and 1-1/2" down. Simply drill out the screw, retract your drill bit and turn the safe handle.

I have read of some folks that like drilling through the back of a safe to unscrew the wheel curb. They then rotate the curb to have it drop into the interior of the safe and simply turn the handle to unlock the safe. That technique will not work on this particular safe because of the placement of the slide drawer in the center of the compartment.

When doing safe work here on the Jersey shore, it will often involves antiques rather than the newer



models. And just as often those safes will be clunkers that should be scrapped, thrown out and replaced rather than forced back into service. It was rewarding to work on a classic that had been so well kept.

Never the less, try not to become so enamored with a safe, antique or not, so as to not charge a respectable price for your time and talent. After all, this is not a service, like an auto opening, that the customer can obtain from a tow truck driver. Enjoy your next safe and may the fates smile upon you. **TNL**



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# Reed Report

**Q.** Bill, I ran out of 1997 Isuzu blanks. Is there anything I can do to substitute it with?

**A.** Yes. Try Ilco P1107 for Chevrolet, ESP Y154 for Chrysler, or Ilco P1793 for Chrysler. I am sure these will do the job for you.

**Q.** If I have a Toyota car with an X151 keyway and the fuel door has a lock on it, can this help?

**A.** Yes, it can, if you use tryout keys. Make a key to the fuel door and use the appropriate lettered set to find the door key. Progress the last cut for the ignition. Otherwise use the entire door set and progress the ignition. Even spaces use even depth number only, and odd spaces use odd depth numbers only.

**Q.** I had an early model Hyundai auto and could not for the life of me get the plug out on the ignition. I finally turned down the job, went home in disgust, and tried to find some information on it, and was unable. Could you possibly help me out just in case I get another one?

**A.** The ignition plugs on the early model Hyundai's can be removed by using a pick on the eighth (retainer) tumbler. To replace the plug, hold down the steering lock mechanism with a pick.

**Q.** I had the fortune of attending your seminar on "How to become a millionaire locksmith," and you talked briefly about business cards and how these successful locksmiths all agreed on certain items pertaining to the cards. What are these items?

**A.** You should always put your area code on the card as well as your zip code. Also always put your name on the card along with your company name. Hopefully, your company name is the same as your personal name.

We also pointed out that many locksmiths seem to hoard their cards and don't hand them out as often as they should. Instead of going through 500 cards a year, you should use 500 cards per month. At that point we discussed the best places to use the cards. I hope this refreshes your memory.



Yours For Better Security,

*Bill Reed*  
Bill Reed

## Scatter Shooting while wondering whatever happened to . . . Web Sharp

**Q.** I have been locksmithing now for about fifteen years, and have always valued your opinion. I would like to call on you opinion one more time, if I may. About 90% of my business is auto lock servicing. Never before have we had all of the books available as we do now. I have been a Hank Spicer fan for years, and have purchased every single volume he has ever written. My question is this: Who do you personally feel is the best writer of the 90's.

**A.** For auto locks, Hank is still among the best. However, I recently promoted some new books from Michael Hyde and I made this statement "Michael Hyde is the #1 write in our industry today. About every 10 years we get new blood and energy, and ONE always stands out above the rest. Mike Hyde is that ONE for this decade".

I agree with you. We have more good books on autos than ever before. Little do the young locksmiths realize how important that is. Fifteen years ago they were hard to find. As long as we have the Hanks and Mikes out there, we'll do fine.

**Q.** I have found your search for the oldest shop in America to be very interesting. Did you ever find a winner?

**A.** I think I did, and I strongly emphasize the word THINK. As of right now, the oldest shop in America is owned by David Stoia and his brother Ted. The company is the Boston Lock & Safe Co., and it was founded in 1790. O.K. guys and gals, who can beat that? **IN!**

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May 2	Phoenix, AZ	Sept. 26	San Antonio, TX
June 6	Seattle, WA	Oct. 17	Washington, DC
July 18	Columbia, SC	Nov. 7	Salt Lake City, UT



# BUSINESS BRIEFS



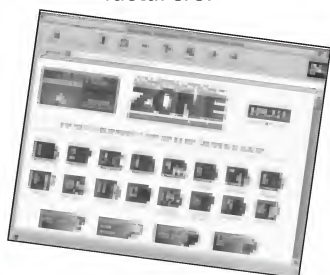
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After serving for a number of years as technical products specialist at Security Lock Distributors, James Branagan has been appointed manager of Security's new Las Vegas Warehouse. Mr. Branagan has worked in the security industry for over 20 years, having hands on experience as a locksmith, installer, and a security products service manager before joining Security.

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## **Kleier Construction Zone**

The Construction-Zone ([www.construction-zone.com](http://www.construction-zone.com)), a new Internet mall, offers both suppliers and door hardware specifiers the ease and convenience of conducting commerce over the Internet. The Construction Zone is a vehicle for product information, from product aesthetic details to ordering. Serving essentially two markets, the site provides an interactive resource center for architects, engineers, contractors (A.E.C.) and other construction industry professionals and acts as a commerce center for distributors and manufacturers.



## **Adams Rite Manufacturing Co. Receives ISO 9000 Registration**

ISO 9000, the international standard that signifies an assurance of quality and process control, was granted to Adams Rite Manufacturing Co. this past June for their design/development, production, installation and servicing of architectural hardware products. The certification, which requires companies to thoroughly document operating procedures and to demonstrate through audits that the procedures are being followed, promises many benefits to both Adams Rite and to its customers.



**Bergstrom  
Named  
Director  
Of Sales**

The DORMA Group has announced the appointment of John C. Bergstrom as director of sales. With 11 years of architectural hardware experience, Bergstrom will assume responsibility for overall sales activity for the DORMA Group. All field sales agencies will report to him.

## **Darex Product Discontinuation**

The production of the Darex TR70 and TR60 countersink, tap and reamer sharpeners will end September 30, 1997. Since the inception of the TR series in 1991, Darex has introduced seven new models of drill bit sharpeners, the most popular being the SP2500. This increased production time along with slowing TR sales, has precipitated the TR's demise. To those of you who have purchased a TR sharpener, rest assured we will continue to provide

factory warranty support and parts for many years. To those of you who have been waiting for the right time to buy; there will never be a better time.

## **Knight Plant Manager**

Knight Safe Manufacturing has announced the return of Art Corona who will take over as plant/production manager. Art has over 30 years experience in design, manufacture, quality control and technical expertise. Art was most recently employed at Armor Safe and at U.S. Security. At Knight Safe he will be responsible for all phases of production and plant supervision.

## **Hurd Freezer Door Handle Locks**

You might be surprised to know the Hurd Corporation has been designing locks for freezer doors for over ten years! Imagine how often an industrial freezer door in a restaurant is opened and closed in one day. Due to these extreme demands, Hurd Corporation has designed a very special lock. It has a special keyway, special tumblers, special codes and for a delightful change of pace, it is now available coded with a set of keys from Hurd Corporation.

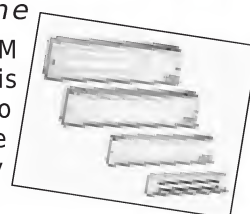
For more information call: 1-800-877-2581.

## **Dynalock Donates Materials**

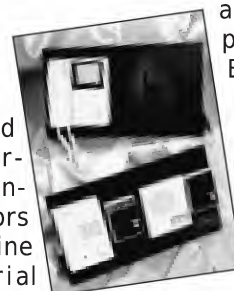
Dynalock Corp. has donated classroom training materials to the Lockmasters, Inc. School, located in Nicholasville, Kentucky and to the Charles Stuart School, Brooklyn, New York. The company has provided the school's security training program with an array of electric security locking products. Dynalock also provides the security industry with training instructors and seminar speakers.

## **JLM Stocking SDC & Aiphone**

J L M Wholesale is excited to announce that they are now stocking the New SDC 1500 Series EmLocks. The design is faultless with a patented epoxy-less all steel magnetic core construction, reducing toxic fumes in the event of a fire emergency. Quality is impeccable throughout the series. Three models provide 650 to 1,650 pounds of strength that will resist maximum force without



a loss of holding power. A micro EmLock is also available with 300 pounds of holding force, designed to secure display cases and cabinets. It



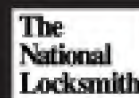
installs quick and easy without any special tools or installation tricks.

## **50 YEARS OF SERVICE TO THE SECURITY INDUSTRY**

Celebrating 50 years of service to the security industry, Ace Lock & Security Supply has undergone a major expansion in preparation for business in the next century. Ace Lock & Security Supply has now established itself nationally as a master distributor of product and parts for the security industry. Operating out of a modern 15,000 square foot warehouse in Union, New Jersey, Ace services locksmiths, alarm dealers and access control security professionals with a multi-million dollar inventory of the best in electronic locksmithing, as well as a full line of basic lock hardware.

TNL





1. = .285
2. = .265
3. = .245
4. = .225

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## Mercedes NM5801-7350

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## Installation Tools

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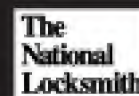
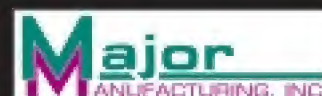




# Mercedes NM5801-7350

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## Mercedes NM5801-7350

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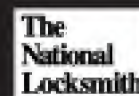
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# Mercedes NM5801-7350

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82	1122134421	55	1344311332	29	1122244422	02	1344211322	76	1221312442	50	1242113124





# TEST DRIVE!

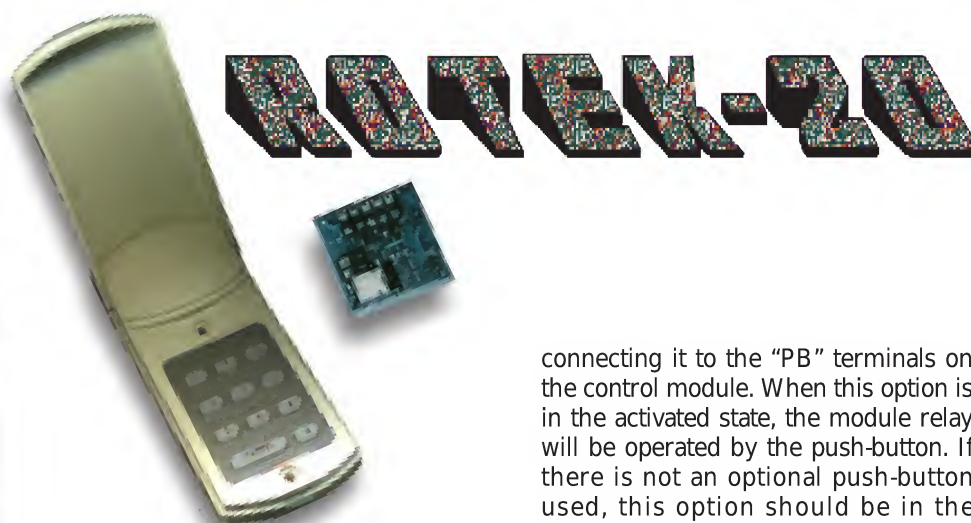
**H**ow many times have you run into a situation where a customer needed, or wanted, a single door access control system, but did not want to spend big bucks to get it? I bet quite often. Many people are in need of just such a system, but are on a shoestring budget. Many residential home owners would like a simple access control system to control an entrance door or maybe a garage door, but have found that it is cost prohibitive. Well, there is something that just may fit the bill.

## PRODUCT

The ROTEK-20 by ROFU International Corp., is a single door access control system that operates with one master code and 19 users codes. The system includes a programmable lighted keypad and a Control Module that is easy to program and install. The keypad includes a simple R232 type telephone plug-in jack for ease of connection to the control module. All that is needed to complete the system is an electric strike and a 12 or 24 volt power supply.

Installation of the ROTEK-20 is as easy as securing the keypad in the location of your choice with two screws and placing the control module on the other side of the wall. The control module is sized to fit in or on the backside of a cover plate for a regular wall electrical box to conceal it. Once in place, the keyboard connecting cable jack snaps into the control module, and two wires from a power supply and electric strike are attached to the control module as well. You can also add an optional exit push-button if desired.

Codes can be from 1 to 6 digits long and any digit can be repeated. For example: 334; 00134; 789789 are all acceptable. Each unit is programmed



with a pre-set factory master code of 111. This master code can be changed at any time. No user codes are pre-set from the factory. All must be programmed in and can also be changed at any time. Once a users code is programmed in, to release the door key in any valid user code and then push "Enter" and the electric strike will be activated.

## FEATURES

The ROTEK-20 has a number of optional features such as: All code groups active; keyboard lights up when a key is pressed; remote push-button is off; time delays for keypad and push-button is variable.

There are three groups of users that can be either active or inactive. Group 1 controls user codes 1 and 11. Group 2 controls user coded 2-10 and group 3 controls user codes 12-20. Group 1 is always active, however groups 2 or 3 can either be made active or inactive when desired.

For the keyboard, there are two choices; either the keyboard lights up for 20 seconds when any key is presses or the keyboard will light up all the time.

The remote push-button option is used to activate an external push-button. A push-button can be added by

connecting it to the "PB" terminals on the control module. When this option is in the activated state, the module relay will be operated by the push-button. If there is not an optional push-button used, this option should be in the deactivated state. When an optional push-button is activated, it can now be programmed as to how long the output will be activated. The output time can be anywhere from 1 to 99 seconds.

ROFU International Corp. will repair or replace at its discretion, any ROTEK-20 Access Control System failing to operate for any reason, except physical abuse or application of excessive voltage, within a period of 12 months from date of purchase.

## CONCLUSION

The ROTEK-20 is a nice entry level single door programmable access control system that is easy to install and operate. The instructions that come with the unit are a little vague when it comes to installation and the programming procedures are somewhat confusing. Once you get past those shortcomings, the ROTEK-20 is an impressive product at a reasonable price.

If needed, available as a option is a 12 foot telephone extension cord allowing a greater distance between the keypad and control module.

*For more information on the ROTEK-20 contact:*

ROFU International Corporation,  
2004-B 48th Ave., Tacoma, WA 98424.  
Phone: (206) 922-1828, Fax: (206) 922-1728. **TNL**

## IN SUMMARY:

**DESCRIPTION:** The ROTEK-20 by ROFU International Corp., is a single door access control system that operates with one master code and 19 users codes.

**PRICE:** \$175.00

**TEST DRIVE RESULTS:** The ROTEK-20 is a nice entry level single door programmable access control system that is easy to install and operate.